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ABSTRACT

Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to pesticides, hazardous wastes, and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross-references, descriptors, and availability are provided for each entry. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements of their problems. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources" or IRIS Supplements I-X. (JN)

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Water

Water Quality Instructional Resources Information System

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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SE040 731

Prepared by

EPA Instructional Resources Center
SMEAC Information Reference Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

as part of
Grant No. T-901366010

WATER QUALITY INSTRUCTIONAL
RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts
to Water Quality and Water
Resources Materials

Supplement XI (1982)
September, 1982

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Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

(614) 422-6717

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I. General Information about Materials in IRIS.

A. What types of materials are included in IRIS?

The EPA Instructional Resources Center (water) acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the EPA Instructional Resources Center is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this compilation, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EPA Instructional Resources Center at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

C. How can a user locate materials in IRIS?

1. All materials placed in IRIS (water) collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of this compilation and similar ones to follow and (2) by computer.

The first compilation contained resumes of selected materials processed for the previous IRIS (water) collection and resumes of selected materials of items added to the IRIS (water) collection. A limited number of copies of the compilation in paper copy and microfiche are available free of charge as long as the supply lasts from the EPA Instructional Resources Center. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Instructional Resources Center.

Quarterly updates of the compilation are available by subscription on a yearly basis beginning November, 1979. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EPA Instructional Resources Center. A subscription to the quarterly supplements for 1981-82 is $12.00 (within the U.S.). Price to Canada is $14.00. Prices in other Countries is $20.00. Separate quarterly supplements are $4.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched by both batch and on-line computer searches. The IRIS tapes are available for searching through the Bibliographic Retrieval Services, Inc., (BRS) and with Dialog. Any search service that currently subscribes to BRS or Dialog is able to search the IRIS data base by on-line techniques. Individuals or agencies with computer terminals and telephone connection equipment can subscribe to BRS or Dialog and do their own searches if they desire.

Information regarding BRS may be obtained by writing or phoning BRS, 1200 Route 7, Latham, NY 12110, (518) 783-1161.

Information regarding Dialog may be obtained by writing or phoning Dialog Information Retrieval Service, 3460 Hillview Avenue, Palo Alto, CA 94304, (415) 858-3775.

Plans are being made to mount IRIS tapes with other on-line vendors. Information regarding this service will be announced in a future EPA IRC Bulletin and in mailings from the EPA Instructional Resources Center.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202) 783-3238

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not, contact the EPA Instructional Resources Center for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright but most users of the tapes gain access to them through three major database vendors: Dialog, Systems Development Corporation (Orbit), and Bibliographic Retrieval Services. For the addresses of search services in your state that can search these databases, contact the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EPA Instructional Resources Center for $0.03 per page plus $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EPA Instructional Resources Center.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press
2214 North Central at Encanto
Phoenix, Arizona 85004
(602) 254-6156

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. Current prices are $8.00 for each article and $10.00 for articles published prior to January 1981. For further information write to:

UMI Article Reprint Department
300 North Zeeb Road
Ann Arbor, Michigan 48106
(800) 521-0600

II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered into ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered in ERIC

   a. IRIS NUMBER: EW006023
   b. PUBLICATION DATE: FEB 81
   c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
   d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
   e. DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *MASS BALANCE; *PROJECT DESIGN; *POLLUTION ENGINEERING; *PIPES; *WATER RESOURCES

   f. DESCRIPTIVE NOTE: 30-33P.
   g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN, WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.

   h. AVAILABILITY: POLLUTION ENGINEERING; V13 N2

   a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

   b. PUBLICATION DATE -- date material was published according to information on the material.

   c. TITLE

   d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.

   e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceeded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

   f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed. The price of the material quoted is the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY -- information in this field indicates where the material can be obtained.

2. Sample resume of material entered into ERIC (Resources in Education)

Items entered into ERIC (Resources in Education) will have a few additional data fields.

IRIS ACCESSION NUMBER: EW006664
PUBLICATION DATE: 80
TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.
DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS; ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; *LAND USE; NATURAL RESOURCES; *POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; *WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE-NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER
RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH
WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF
PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE
CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR
INCREASING AND IMPROVING THE MULTIPLE PRODUCTS OF
a. WATERSHED LANDS. (ED 197 941)

AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P. O. BOX 190, ARLINGTON, VA 22210

a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.

b. EDRS PRICE -- if material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
P. O. Box 190
Arlington, Virginia 22210
(703) 841-1212

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EPA Instructional Resources Center.

B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index or Author Index.

1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to Laboratory Techniques and to Wastewater Treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence, they are not listed in this index.

III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about six times a year as information is available.

If you are not on the mailing list write to the EPA Instructional Resources Center. Limited numbers of some back issues are still available.

If you need information about IRIS you can also phone (614) 422-6717 with your questions.

V. Requests for Assistance in Using IRIS

A. Assistance in use of IRIS manuals

If you need help in using the IRIS manuals, phone (614) 422-6717 or write to the EPA Instructional Resources Center. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

B. Assistance in accessing IRIS by computer

1. Conducting searches.

   See section VIII.

2. Subscribing to BRS, Inc. for computer searching of IRIS.

   Contact: Bibliographic Retrieval Services, Inc.
   1200 Route 7
   Latham, New York 12110
   (518) 783-1161

3. Subscribing to Dialog for computer searching of IRIS.

   Contact: Dialog Information Retrieval Service
   3460 Hillview Avenue
   Palo Alto, California 94304
   (415) 858-3775

4. Contacting a computer search service (an agency that will conduct a search for you, usually for a fee.)

   The EPA Instructional Resources Center maintains a list of agencies that can conduct searches. Most charge a fee, though some are free to qualified users in a limited geographical area.

   Phone or write to obtain information for your area.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EPA Instructional Resources Center plans to develop some user service products in selected areas in 1982.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse on Adult, Career, and Vocational Education
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
School of Education, Room 2108
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings, theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management
University of Oregon
Library, Room 108
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. **ERIC Clearinghouse on Handicapped and Gifted Children**

Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. **ERIC Clearinghouse on Higher Education**

George Washington University
One Dupont Circle, NW, Suite 630
Washington, DC 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

G. **ERIC Clearinghouse on Information Resources**

Syracuse University
School of Education
Huntington Hall
150 Marshall Street
Syracuse, New York 13210
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California at Los Angeles (UCLA)
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
3520 Prospect Street, NW
Washington, DC 20007
Telephone: (202) 298-9292

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English and speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills
National Council of Teacher of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools

New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics and Environmental Education

The Ohio State University
1200 Chambers Road - Room 310
Columbus, Ohio 43212
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

M. ERIC Clearinghouse for Social Studies/Social Science Education

Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education

American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, NW, Suite 610
Washington, DC 20036
Telephone: (202) 293-2450

School personnel at all levels, all issues from selection through preservice and inservice preparation and training to retirement; curricula, educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation
Educational Testing Service (ETS)
Rosedale Road
Princeton, New Jersey 08541
Telephone: (609) 734-5176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects of programs.

P. ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Box 40
525 West 120th Street
New York, New York 10027
Telephone: (212) 678-3433

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences), education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics, structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Central ERIC
National Institute of Education (NIE)
Information Resources Division
1200 - 19th Street, NW
Washington, DC 20208
Telephone: (202) 254-5500

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

VII. How to Structure a Computer Search of IRIS

This explanation relates to the IRIS data base that can be searched on-line through Bibliographic Retrieval Services, Inc. or Dialog. As IRIS becomes available through other sources, information relevant to those services will be provided.

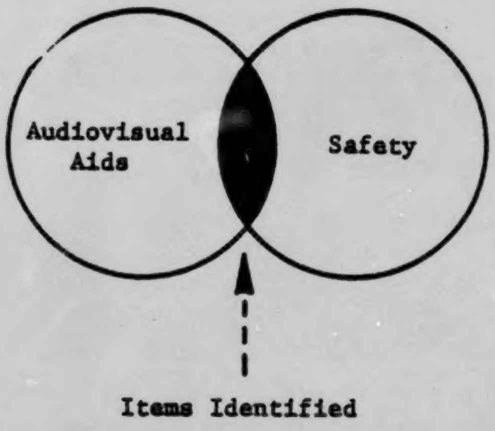
A few notes about the service are important. The following fields are searchable by computer: (1) IRIS Accession Number (EW Number), (2) ERIC Accession Number (ED Number), (3) Authors, (4) Institution, (5) Title, (6) Subject index terms, and (7) Abstracts.

If you submit a search of IRIS through BRS or Dialog, the program will search for the words you select in three fields unless the searcher requests to limit the search. These fields are: (1) title field, (2) subject index field, and (3) abstract. We recommend you use this feature especially for searches on specific terms. If you find more material than you want by this techniqu, you can narrow the search to items that may have the most information on the topic by limiting the search to the subject index field.

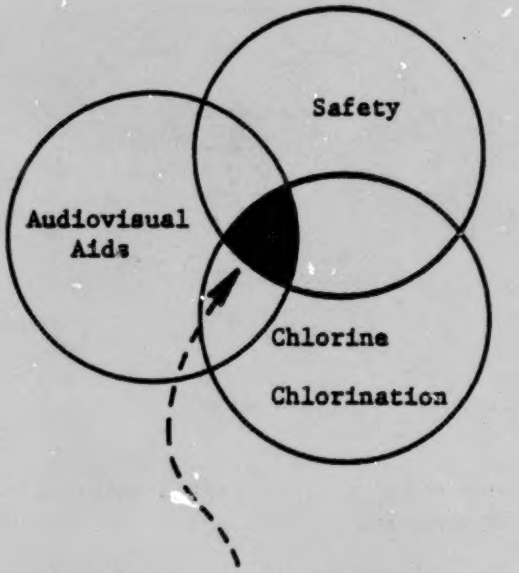
Several sample searches are listed below and on the following pages.

A. Sample 1

If you want to locate audiovisual aids that relate to safety you would submit a search with audiovisual aids and safety. Materials that included the terms both audiovisual aids and safety in the title field, the abstract and the subject index field would be identified by computer.

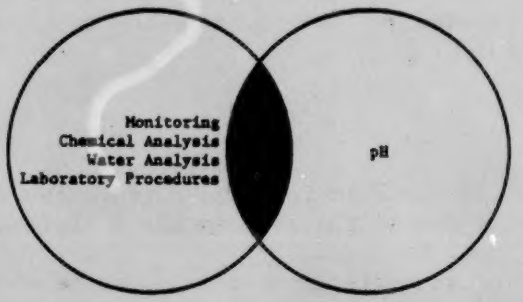


The computer program can tell you the number of items, the title of the items, or print the entire resume of each item. If you were primarily interested in audiovisual aids, safety, and chlorine you would submit a search of these three terms. You might want to include chlorides and chlorination as well as chlorine in the search. This search would identify materials that contained audiovisual aids, safety, and one or more of the words, chlorine and chlorination.


Safety
Audiovisual Aids
Chlorine
Chlorination
Items Identified

B. Sample 2

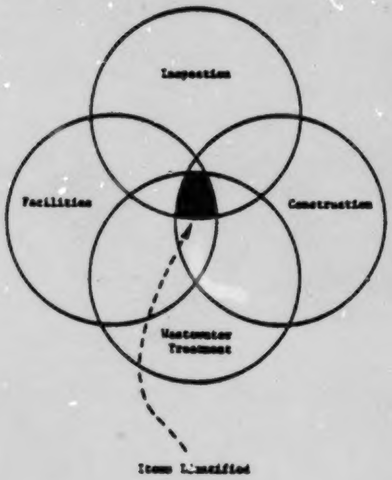
If you want to identify materials related to monitoring, you should include several related terms and the chemical, material, or situation that is being monitored. See the example below.


Monitoring
Chemical Analysis
Water Analysis
Laboratory Procedures
pH

This search would identify all the items that included any of the terms on the left and pH.

C. Sample 3

If you are interested in materials related to inspection and construction you could conduct a search of these two terms. The search would identify all materials that included both terms. If you were interested in only wastewater treatment facilities you could construct a search as diagrammed.



This search would yield specific materials and demonstrates how a computer search can help you locate materials you want.

The subject index can also be used to help you select words to include in a search. Words listed in the subject index are certain to be in the searchable fields. Therefore, selecting these terms to use in structuring a search will increase the probability of locating materials. Some words will appear in the title or abstract that are not included in the subject term field. Such words can be used to check if any materials are in the data base. If, however, you conduct a search with such a word it is usually best to include a synonym that is in the subject index.

VIII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

A. A number of audiovisual materials can be obtained on loan or purchased from the EPA Instructional Resources Center. Most items previously available from the NTOTC office are available from the EPA Instructional Resources Center at The Ohio State University. For further information write or call.

B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service
P. O. Box 190
Arlington, Virginia 22210
(703) 841-1212

C. The EPA Instructional Resources Center will provide Xerox copies of materials that are not copyrighted for $1.00 per document plus $0.03 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

RESUME SECTION

IRIS ACCESSION NUMBER: EW004778
PUBLICATION DATE: 79

TITLE: OPERATOR TRAINING '79 WORKSHOP PROCEEDINGS.

DESCRIPTOR: CASE STUDIES; *CONFERENCE PROCEEDINGS; INSTRUCTIONAL MATERIALS; MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *POLLUTION CONTROL; *TRAINING PROGRAMS; *TRAINING; *WASTEWATER TREATMENT; *WORKSHOPS

DESCRIPTIVE NOTE: 135P.

ABSTRACT: THIS PUBLICATION CONTAINS THE PROCEEDINGS OF THE 1979 OPERATOR TRAINING WORKSHOP SPONSORED BY THE NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION. PAPERS ARE GROUPED INTO THE FOLLOWING SECTIONS: ADULT LEARNER, START-UP TRAINING, MANAGEMENT AND DELIVERY OF TRAINING, IN-HOUSE TRAINING PROGRAMS, TRAINING MATERIALS, AIR AND NOISE TRAINING, AND WATER POLLUTION CONTROL TRAINING.

AVAILABILITY: NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION, 158 SOUTH NAPOLEON STREET, VALPARAISO, IN 46383 (219) 465-1744

IRIS ACCESSION NUMBER: EW006691

PUBLICATION DATE: JUL 81

TITLE: YOU WANT ME TO DO WHAT?

PERSONAL AUTHOR: JONES, PAMELA R.; AND OTHERS

DESCRIPTOR: *CAREER DEVELOPMENT; *EDUCATIONAL NEEDS; *EDUCATIONAL OBJECTIVES; EVALUATION; *JOB SKILLS; *MANAGEMENT; *PLANNING; *SKILL DEVELOPMENT; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 56-62P.

ABSTRACT: RECOGNIZED IS THE TRAINING PREPARATION NEEDED BY A MANAGER IN ORDER TO COACH SUBORDINATES IN THE RECOGNITION OF THEIR CURRENT SKILLS, THOSE NECESSARY FOR THE JOBS THEY DESIRE, AND DEVELOP A PLAN TO OBTAIN THOSE GOALS.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL, V35 N7

IRIS ACCESSION NUMBER: EW006692

PUBLICATION DATE: JUL 81

TITLE: THE MANAGER AS CAREER COUNSELOR.

PERSONAL AUTHOR: MECKEL, NELSON T.

DESCRIPTOR: *CAREER DEVELOPMENT; *CAREER COUNSELING; *JOB SKILLS; *LEADERSHIP; *MANAGEMENT; *PLANNING; *SKILL DEVELOPMENT; *TRAINING TECHNIQUES

DESCRIPTIVE NOTE: 64-69P.

ABSTRACT: SUGGESTIONS ARE MADE TO ASSIST MANAGERS TO IMPROVE THEIR COUNSELING SKILLS AND INCREASE THEIR WILLINGNESS TO PRACTICE CAREER COUNSELING, THEREBY ENABLING THEM TO ENHANCE THE CAREER DEVELOPMENT OF THEIR SUBORDINATES.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL, V35 N7

IRIS ACCESSION NUMBER: EW006693

PUBLICATION DATE: JUL 81

TITLE: TRAINING MANAGERS FOR THEIR ROLE IN A CAREER DEVELOPMENT SYSTEM.

PERSONAL AUTHOR: LEIBOWITZ, ZANDY B.; SCHLOSSBERG, NANCY K.

DESCRIPTOR: *CAREER DEVELOPMENT; *EDUCATIONAL PROGRAMS; *JOB SKILLS; *JOB SATISFACTION; *MANAGEMENT; *PLANNING; *PROGRAM DEVELOPMENT; *SKILL DEVELOPMENT; *TRAINING

DESCRIPTIVE NOTE: 72-79P.

ABSTRACT: THE PIVOTAL ROLE OF THE RESPONSIBILITY OF THE MANAGER IS DESCRIBED THROUGH THE CAREER PLANNING AND DEVELOPMENT OF HIS SUBORDINATES. A TRAINING MODEL IS PRESENTED TO HELP IMPROVE THE MANAGER'S CAREER PLANNING SKILLS AND BEHAVIORS.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL, V35 N7

IRIS ACCESSION NUMBER: EW006694

PUBLICATION DATE: JUL 81

TITLE: IMPLEMENTING CAREER DEVELOPMENT PROGRAM.

PERSONAL AUTHOR: HANSON, MARLYS C.

DESCRIPTOR: *BEHAVIORIAL CHANGES; *CAREER DEVELOPMENT; *JOB SKILLS; *MANAGEMENT; *PLANNING; *PROGRAM DEVELOPMENT; SUPERVISION; *TRAINING PROGRAMS; *VALUES

DESCRIPTIVE NOTE: 80-90P.

ABSTRACT: THE PROCESS IMPLEMENTING A CAREER/LIFE PLANNING PROGRAM IS DESCRIBED THROUGH RELATED SUPERVISORY AND MANAGEMENT TRAINING BASED ON A SUPPORTIVE ENVIRONMENT BY INCREASING AWARENESS, SKILLS, AND REWARDS FOR HUMAN RESOURCE DEVELOPMENT.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL, V35 N7

IRIS ACCESSION NUMBER: EW007005
PUBLICATION DATE: OCT 81

TITLE: WASTEWATER TREATMENT WITH POWDERED ACTIVATED CARBON.

PERSONAL AUTHOR: PITKAT, CHARLES; BERNDT, CRAIG

DESCRIPTOR: *ACTIVATED CARBON; *CARBON REGENERATION; *CASE STUDIES; DESIGN; ECONOMIC FACTORS; EQUIPMENT; *FACILITIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *TEXTILE WASTES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 54-56P.

ABSTRACT: THIS ARTICLE REPORTS ON THE SUCCESSFUL USE OF WASTEWATER TREATMENT USING POWDERED ACTIVATED CARBON AND A WET AIR OXIDATION PROCESS FOR CARBON REGENERATION. PERFORMANCE GOALS WERE MET OR EXCEEDED FOR EFFLUENT FLOW OF TREATED TEXTILE DYEHOUSE WASTES. ATTENTION IS FOCUSED ON PLANT DESIGN, PLANT START-UP, REGENERATION PERFORMANCE, AND ECONOMIC FACTORS.

AVAILABILITY: PUBLIC WORKS, V112 N10

IRIS ACCESSION NUMBER: EW007006

PUBLICATION DATE: OCT 81

TITLE: SELECTION OF IRRIGATION SYSTEMS FOR LAND APPLICATION OF MUNICIPAL WASTEWATER.
PERSONAL AUTHOR: SUTHERLAND, JEFFREY C.; MYERS, EARL A.

DESCRIPTOR: EQUIPMENT; GROUNDWATER; HYDROLOGY; *IRRIGATION SYSTEMS; *LAND APPLICATION; *MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; SOILS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 69-72, 91-92P.

ABSTRACT: THIS ARTICLE PRESENTS A DISCUSSION OF RAPID INFILTRATION, SLOW RATE, AND OVERLAND FLOW METHODS FOR LAND APPLICATION OF MUNICIPAL WASTEWATERS. SPECIFIC ATTENTION IS FOCUSED ON GROUNDWATER, SYSTEM DESCRIPTIONS, SPRAY SYSTEMS, AND FIELD CHARACTERISTICS.

AVAILABILITY: PUBLIC WORKS, V112 N10

IRIS ACCESSION NUMBER: EW007007

PUBLICATION DATE: OCT 81

TITLE: TRIPLE-STAGE ODOR CONTROL HELPS CLEAN THE AIR.

PERSONAL AUTHOR: BOVE, PAUL J.

DESCRIPTOR: *CASE STUDIES; DESIGN; EQUIPMENT; MANAGEMENT; *ODOR CONTROL; *ODORS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 75P.
ABSTRACT: THIS ARTICLE DISCUSSES HOW OFFICIALS AT A NEW ADVANCED WASTEWATER TREATMENT FACILITY DEALT WITH TROUBLESOME ODORS. A NEW EQUIPMENT DESIGN FOR TREATING ODORS FROM THE THERMAL SLUDGE STABILIZATION PROCESS WAS EMPLOYED WHICH INCLUDED A BALANCED THREE-STAGE WET SCRUBBING ODOR CONTROL SYSTEM. THE SYSTEM IS REPORTEDLY WORKING WELL.

AVAILABILITY: PUBLIC WORKS, V112 N10

IRIS ACCESSION NUMBER: EW007008

PUBLICATION DATE: OCT 81

TITLE: A PRACTICAL LOOK AT SLUDGE COMPOSTING.

PERSONAL AUTHOR: GOULD, M; AND OTHERS

DESCRIPTOR: *COMPOSTING; COSTS; *DESIGN; ECONOMIC FACTORS; EQUIPMENT; *MANAGEMENT; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *RECOMMENDATIONS; SITE SELECTION; *SLUDGE; *SLUDGE DISPOSAL; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 76-79P.

ABSTRACT: THIS ARTICLE PROVIDES BASIC INFORMATION ON SLUDGE COMPOSTING OPERATIONS FOR THE MUNICIPALITY CONSIDERING INSTALLATION OF SUCH A SYSTEM. AMONG THE TOPICS ADDRESSED ARE SLUDGE USE REGULATIONS, THE COMPOSTING PROCESS, SITE DESIGN, EQUIPMENT, AND ECONOMIC FACTORS.
AVAILABILITY: PUBLIC WORKS, V112 N10

IRIS ACCESSION NUMBER: EW007009

PUBLICATION DATE: OCT 81

TITLE: TREATMENT PLANT FEATURES ULTRAVIOLET DISINFECTION.

PERSONAL AUTHOR: GUARINO, CARMENT F.; WREN, WAYNE C.

DESCRIPTOR: CASE STUDIES; *DESIGN; *DISINFECTION; EQUIPMENT; *FACILITIES; MANAGEMENT; *OPERATIONS (WASTEWATER); *TECHNOLOGICAL ADVANCEMENTS; *ULTRAVIOLET LIGHT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 82-83P.

ABSTRACT: THIS ARTICLE DISCUSSES THE OPERATIONS OF A SOON-TO-BE-COMPLETED INNOVATIVE WASTEWATER TREATMENT PLANT. THE NEW DESIGN ENCOMPASSES SOLAR ENERGY TO AID IN ANAEROBIC DIGESTION AND FEATURES ONE OF THE FIRST FULL-SCALE WASTEWATER DISINFECTION SYSTEMS THAT USES ULTRAVIOLET LIGHT.

AVAILABILITY: PUBLIC WORKS, V112 N10

IRIS ACCESSION NUMBER: EW007412
PUBLICATION DATE: 69

TITLE: IT'S YOUR WORLD ... THE GRASSROOTS CONSERVATION STORY.

DESCRIPTOR: *ADMINISTRATION; *CONSERVATION; *DEPARTMENT OF INTERIOR; ENVIRONMENTAL INFLUENCES; FEDERAL GOVERNMENT; *GOVERNMENT AGENCIES; LAND USE; *MANAGEMENT; MINERALS; *NATURAL RESOURCES; *PROGRAM DESCRIPTIONS; WATER RESOURCES; WILDLIFE

DESCRIPTIVE NOTE: 96P.

ABSTRACT: THIS PUBLICATION EXAMINES CONSERVATION EFFORTS BY INDIVIDUALS AND VARIOUS FEDERAL GOVERNMENT AGENCIES. ATTENTION IS FOCUSED ON THE U.S. DEPARTMENT OF THE INTERIOR. TOPICS INCLUDE: FISH AND WILDLIFE RESOURCES, LAND RESOURCES, WATER RESOURCES, MINERAL AND FUEL RESOURCES, AND HUMAN RESOURCES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007643

PUBLICATION DATE: 80

TITLE: NATIONAL HANDBOOK OF RECOMMENDED METHODS FOR WATER-DATA ACQUISTIONS.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; DATA; *DATA ACQUISITION; GROUNDWATER; *HANDBOOKS; HYDROGEOLOGY; *HYDROLOGY; *MEASUREMENT; SOILS; *WATER QUALITY

ABSTRACT: THE PURPOSE OF THIS MANUAL IS TO ASSURE GREATER COMPARABILITY, COMPATABILITY AND USABILITY OF WATER DATA BY DOCUMENTING THE METHODOLOGIES COLLECTORS AND USERS OF THE HYDROLOGIC DATA AGREE TO BE MOST SUITABLE. THE HANDBOOK PRESENTS THE WATER-DATA ACQUISITION METHODS RECOMMENDED BY A LARGE SECTOR OF MAJOR U.S. DATA COLLECTORS AND USERS. CHAPTERS INCLUDE: SURFACE, WATER, GROUNDWATER, SEDIMENT, BIOLOGICAL AND MICROBIOLOGICAL QUALITY OF SURFACE AND GROUNDWATER, CHEMICAL AND PHYSICAL QUALITY OF WATER AND SEDIMENT, SOIL WATER, DRAINAGE BASIN CHARACTERISTICS, EVAPORATION AND TRANSPIRATION, SNOW AND ICE, HYDROMETEOROLOGICAL OBSERVATIONS, WATER USE, AND WATER DATA HANDLING AND EXCHANGE.

AVAILABILITY: CHIEF, OFFICE OF WATER DATA COORDINATION, U.S. GEOLOGICAL SURVEY, 417 NATIONAL CENTER, RESTON, VA 22092

IRIS ACCESSION NUMBER: EW007660

PUBLICATION DATE: 81

TITLE: ENVIRONMENTAL AUDIT HANDBOOK: BASIC PRINCIPLES OF ENVIRONMENTAL COMPLIANCE AUDITING.
PERSONAL AUTHOR: TRUITT, THOMAS H.; AND OTHERS
DESCRIPTOR: *AUDITS; *COMPLIANCE; *ENVIRONMENT; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; *LAWS; *PLANNING; *POST SECONDARY EDUCATION; *REGULATIONS; *STANDARDS

DESCRIPTIVE NOTE: 333P. PRICE: $55.00

ABSTRACT: THIS HANDBOOK REVIEWS ACTIVITIES AFFECTING THE ENVIRONMENT TO HELP CORPORATE EXECUTIVES DETERMINE IF THEIR COMPANY IS COMPLYING WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS AND REGULATIONS. THE BOOK IS DESIGNED TO ASSIST THE READER IN CARRYING OUT A FIRST-TIME ENVIRONMENTAL COMPLIANCE AUDIT AND TO BE HELPFUL TO THOSE EVALUATING AUDIT PROCEDURES THAT ARE ALREADY IN PLACE. CHAPTERS DISCUSS WHAT IS MEANT BY AN ENVIRONMENTAL COMPLIANCE AUDIT AND THE PURPOSE AND BENEFIT OF THE AUDIT FUNCTION, THE QUESTION OF PROTECTING THE AUDIT FUNCTION, THE QUESTION OF PROTECTING THE AUDIT REPORT FROM PUBLIC DISCLOSURE AND WAYS TO MAXIMIZE SUCH PROTECTION WHERE IT IS LAWFUL AND APPROPRIATE TO DO SO, A GUIDE TO THE FUNDAMENTAL STEPS INVOLVED IN PLANNING AND CONDUCTING AN ENVIRONMENTAL COMPLIANCE AUDIT, CORPORATE AND INDIVIDUAL REPORTING OBLIGATIONS, AND AN OVERVIEW OF THE GENERAL FEDERAL APPROACH TO ENVIRONMENTAL REGULATION.

AVAILABILITY: EXECUTIVE ENTERPRISES PUBLICATIONS CO., INC., 33 WEST 60TH STREET, NEW YORK, NY 10023

IRIS ACCESSION NUMBER: EW007736

PUBLICATION DATE: SEP 77
TITLE: BASIC ELECTRICITY - TRAINING MODULE 3.325.1.77.

DESCRIPTOR: *COURSE OUTLINES; *ELECTRICITY; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; SCIENCE EDUCATION; *TEACHING GUIDES; *TRAINING MATERIALS

DESCRIPTIVE NOTE: 79P.

ABSTRACT: THIS PUBLICATION CONTAINS INSTRUCTIONAL MATERIALS FOR A TRAINING MODULE ON BASIC ELECTRICITY. INCLUDED ARE TOPIC OUTLINES, VISUAL AIDS, AND AN EVALUATION EXAMINATION. TOPICS COVERED INCLUDE ELECTRICAL TERMS AND MEASURES, WIRING MATERIALS AND PRACTICES, FUSES AND BREAKERS, MOTORS, SAFETY, AND APPLICATIONS.

AVAILABILITY: IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY, WALLACE STREET OFFICE BUILDING, DES MOINES, IA 50319

IRIS ACCESSION NUMBER: EW007832

PUBLICATION DATE: NOV 81

TITLE: A MULTIMEDIA INFORMATION PACKAGE REGARDING LAND APPLICATION OF WASTEWATER AND SLUDGE: A STUDY OF TRAINING DISSEMINATION SPECIALISTS, EVALUATION METHODS, AND COST-EFFECTIVENESS.

PERSONAL AUTHOR: PHILLIPS, LAMARR A.; AND OTHERS

DESCRIPTOR: *AUDIOVISUAL AIDS; *COST EFFECTIVENESS; *EDUCATIONAL TECHNOLOGY; *INFORMATION DISSEMINATION; *INSTRUCTION; *LAND APPLICATION; *MULTIMEDIA INSTRUCTION; *PERFORMANCE EVALUATION; *POST SECONDARY EDUCATION; *SLUDGE; TRAINING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 143P. PRICE CODE: PC A07/MF A01; PB82-168600

ABSTRACT: THIS REPORT EXAMINES AN ATTEMPT TO PROVIDE AN ALTERNATIVE MEANS OF DISSEMINATING INFORMATION BY PRODUCING AND EVALUATING THE EFFECTIVENESS OF A MULTIMEDIA TECHNOLOGY TRANSFER PACKAGE ON LAND APPLICATION OF WASTEWATER AND SLUDGE. PARTICIPANT REACTIONS WERE ANALYZED AND THE VARIOUS MEDIA WERE EVALUATED. THE COST-EFFECTIVENESS WAS DETERMINED BY COMPARING ITS PLANNING, PRODUCTION AND DELIVERY COSTS WITH THOSE FOR A SIMILAR PROGRAM PRESENTED LIVE BY RESEARCH SCIENTISTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007834

PUBLICATION DATE: MAY 81

TITLE: INTEGRATION OF PROCESSES FOR WASTEWATER RESIDUALS MANAGEMENT - COMPUTER PROGRAM.

PERSONAL AUTHOR: DICK, R. I.; HASIT, Y.

DESCRIPTOR: *COMPUTER APPLICATIONS; *COMPUTER PROGRAMS; *DATA ANALYSIS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PROGRAM DESCRIPTIONS; *SLUDGE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 131P. PRICE CODE: PC A07/MF A01; PB82-171513

ABSTRACT: THIS REPORT DETAILS COMPUTATIONAL PROCEDURES BASED ON THE OPTIMAL SLUDGE MANAGEMENT PROGRAM (OSMP), AN INTERACTIVE COMPUTER PROGRAM WHICH DETERMINES THE OPTIMAL VALUES OF VARIOUS DESIGN PARAMETERS IN WASTEWATER AND SLUDGE TREATMENT. A NONLINEAR PROGRAMMING ALGORITHM IS USED AS THE OPTIMIZATION PROCEDURE. DESCRIBED ARE THE GENERAL STRUCTURE OF THE PROGRAM, ALL PROCESS VARIABLES, WASTEWATER AND SLUDGE CHARACTERISTICS, AND COST DATA. A KEY IS PROVIDED FOR DESCRIPTIONS OF PROCESS VARIABLES CONTAINED IN A USER MANUAL AND REFERENCES ARE GIVEN TO PLACES IN WHICH THE VARIABLES ARE USED. THE REQUIRED FORM OF INPUT TO THE PROGRAM, THE GENERATED OUTPUT, AND AN ILLUSTRATIVE RUN ARE PRESENTED. ALSO, THE COMPLETE PROGRAM, EXCEPT THE PROPRIETARY OPTIMIZATION PROCEDURE, IS INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007845

PUBLICATION DATE: MAY 82

TITLE: CONTINUING THE QUEST FOR WATER: QUALITY AND QUANTITY.

DESCRIPTOR: *AWWA; *DRINKING WATER; *FEDERAL ROLE; *OBJECTIVES; *PLANNING; *PROFESSIONAL ASSOCIATIONS; *RESEARCH; *WATER RESOURCES; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 54-57,116P.

ABSTRACT: PRESENTED IS AN INTERVIEW OF JOHN H. STACKA, PRESIDENT-ELECT OF AWWA AND ASSISTANT DIRECTOR OF THE DALLAS WATER UTILITIES. THE INTERVIEW COVERED MANY TOPICS RELATING TO THE WATER INDUSTRY.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007846

PUBLICATION DATE: MAY 82

TITLE: SUPPLYING WATER TO THE RURAL COMMUNITY.

PERSONAL AUTHOR: WHYE, MICHAEL; HOLMAN, DAVE

DESCRIPTOR: *CASE STUDIES; *DRINKING WATER; *ECONOMIC FACTORS; *FINANCING; *FACILITIES; *PLANNING; *RURAL AREAS; UTILITIES; *WATER TREATMENT; *WATER QUALITY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 58-60P.

ABSTRACT: DISCUSSED IS THE ORGANIZATION AND FINANCING OF RURAL WATER DISTRICTS, WITH DETAILS OF A RECENTLY COMPLETED SYSTEM AS AN EXAMPLE.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007847

PUBLICATION DATE: MAY 82

TITLE: REGIONAL DETENTION BASINS FOR STORMWATER CONTROL.

PERSONAL AUTHOR: DILORETO, GREGORY E.

DESCRIPTOR: *DESIGN; *DETENTION BASINS; *FACILITIES; *OREGON; *PLANNING; *SURFACE RUNOFF; *STORMWATER; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 61-62P.

ABSTRACT: STORMWATER MANAGEMENT PLANS RELATE TO DETENTION BASINS IN AN AREA WHERE GEOLOGIC CONDITIONS MAKE CONVENTIONAL SYSTEMS UNDULY EXPENSIVE.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007848

PUBLICATION DATE: MAY 82

TITLE: PERCHED BED SUBSURFACE INJECTION OF SLUDGES.

PERSONAL AUTHOR: MAPHIS, SAM W.

DESCRIPTOR: *FACILITIES; *LAND USE; *LAND DISPOSAL; *PLANNING; *PERCHED BED SYSTEMS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 62-63P.

ABSTRACT: THE PERCHED BED SYSTEM OVERCOMES PROBLEMS COMMON TO OTHER LAND DISPOSAL METHODS FOR SLUDGE DISPOSAL.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007849

PUBLICATION DATE: MAY 82

TITLE: CALCULATING GRAVITY FLOW WITH THE AID OF MICRO-COMPUTERS.

PERSONAL AUTHOR: FRIEDMAN, RONALD B.

DESCRIPTOR: *CALCULATIONS; *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *COMPUTER PROGRAMS; *ENGINEERING; *GRAVITY FLOW; *HYDRAULICS; *MICROCOMPUTERS; *PIPES; *PROGRAMMING; *WATER FLOW

DESCRIPTIVE NOTE: 68-69P.

ABSTRACT: THE AVAILABILITY OF THE MICRO-COMPUTER ENABLES ENGINEERING OFFICES TO SIMPLIFY A VARIETY OF ENGINEERING CALCULATIONS. EXAMPLES ARE GIVEN FOR DETERMINING SIZE AND SLOPE OF PIPE.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007850

PUBLICATION DATE: MAY 82

TITLE: WATER RATE STUDIES AND RATE MAKING PHILOSOPHY.

PERSONAL AUTHOR: STANLEY, RICHARD H.; LUIKEN, ROBERT L.

DESCRIPTOR: *DRINKING WATER; *ECONOMIC FACTORS; OBJECTIVES; *PLANNING; *RATES; *RATE STRUCTURES; *RESEARCH; *WATER RATES; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 70-73,116P.

ABSTRACT: PRESENTED IS A REVIEW OF THE OBJECTIVES AND ALTERNATIVE APPROACHES FOR ESTABLISHING WATER RATES. DISCUSSED ARE RATE OBJECTIVES, RATE MAKING PROCESSES, AND WATER RATE STUDIES.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007851

PUBLICATION DATE: MAY 82

TITLE: OVERHAULING A WATER SYSTEM.

PERSONAL AUTHOR: WITTE, CHARLES H.

DESCRIPTOR: *DRINKING WATER; *ECONOMIC FACTORS; *FACILITIES; *FINANCES; *PLANNING; *PROJECT DESCRIPTIONS; *REHABILITATION; *UTILITIES; *WATER DISTRIBUTION; *WATER TREATMENT; *WATER SUPPLY

DESCRIPTIVE NOTE: 74-75P.

ABSTRACT: DISCUSSED IS THE REHABILITATION OF A DETERIORATED WATER SYSTEM ACQUIRED BY A MUNICIPAL UTILITIES AUTHORITY. FINANCING THE PROJECT WAS A MAJOR PROBLEM. PROCEDURES USED IN PLANNING AND FINANCING THE PROJECT ARE DESCRIBED.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007852

PUBLICATION DATE: MAY 82

TITLE: ELIMINATION OF ODOR FROM ANAEROBIC LAGOONS.

PERSONAL AUTHOR: HARGETT, C. WILLIAM; RYBUS, MARK H.

DESCRIPTOR: *ANAEROBIC LAGOONS; *INDUSTRIAL WASTES; *LAGOONS; *MEAT PROCESSING PLANTS; *ODORS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 82-83P.

ABSTRACT: DECOMPOSITION OF PACKING PLANT WASTES CAUSED ODOR PROBLEMS UNTIL A SCUM BLANKET WAS FORMED.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007853

PUBLICATION DATE: MAY 82

TITLE: PLANT EXPANSION VIA HIGH-RATE PRETREATMENT.

PERSONAL AUTHOR: COLEE, CLARENCE D.; HENDERSON, KENNETH W.

DESCRIPTOR: *DRINKING WATER; *FACILITIES; *OPERATIONS (WATER); *PRETREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 84-86P.

ABSTRACT: USE OF HIGH-RATE PRETREATMENT WILL EXPAND WATER TREATMENT PLANT CAPACITY BY 50 PERCENT WITH MINIMAL CAPITAL EXPENDITURE.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007854

PUBLICATION DATE: MAY 82

TITLE: SOLVING A POOR OXYGEN TRANSFER PROBLEM.

DESCRIPTOR: *CALIFORNIA; *CASE STUDIES; *DIFFUSERS; *ENERGY CONSERVATION; *EQUIPMENT; *OXYGEN TRANSFER; *OPERATIONS (WATER); *SLUDGE; *WATER TREATMENT

DESCRIPTIVE NOTE: 88P.

ABSTRACT: NEW DIFFUSERS AT AN ACTIVATED SLUDGE PLANT OVERCOME PROBLEMS WITH OXYGEN TRANSFER AND HIGH ENERGY COSTS.

AVAILABILITY: PUBLIC WORKS V113 N5

IRIS ACCESSION NUMBER: EW007855

PUBLICATION DATE: MAY 82

TITLE: "PROFESSIONAL DEVELOPMENT FOR NEW TRAINERS."

PERSONAL AUTHOR: BROADWELL, MARTIN M.

DESCRIPTOR: *BEGINNING TRAINERS; COURSE DEVELOPMENT; EVALUATION; *HUMAN RESOURCES DEVELOPMENT; INSTRUCTION; *INSTRUCTIONAL IMPROVEMENT; *MANAGEMENT; *ON-THE-JOB TRAINING; *PERSONNEL DEVELOPMENT; *PROFESSIONAL DEVELOPMENT; PLANNING; *STAFF DEVELOPMENT; *TRAINERS; *TRAINING

DESCRIPTIVE NOTE: 69-72P.

ABSTRACT: EXAMINED ARE METHODS THAT CAN BE USED BY AN ORGANIZATION IN THE PROFESSIONAL DEVELOPMENT OF THE NEW TRAINER. TOPICS DISCUSSED INCLUDE TRAINING PHILOSOPHY, NEEDS ANALYSIS, COURSE DESIGN, INSTRUCTOR TRAINING, CLASSROOM ENVIRONMENT, TEACHER-LEARNER RELATIONSHIPS, AND EVALUATION.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL V36 N5

IRIS ACCESSION NUMBER: EW007856

PUBLICATION DATE: MAY 82

TITLE: T, D AND Z.

PERSONAL AUTHOR: CRAPO, RAY

DESCRIPTOR: *CHANGE; EFFICIENCY; *HUMAN RESOURCES DEVELOPMENT; *MANAGEMENT; ORGANIZATIONAL EFFECTIVENESS; *ORGANIZATIONAL THEORIES; *PRODUCTIVITY; *STAFF DEVELOPMENT; *THEORY Z; *TRAINING

DESCRIPTIVE NOTE: 102-110P.

ABSTRACT: EXAMINES THE ROLE THE EXPERIENCED TRAINING AND DEVELOPMENT SPECIALIST COULD PLAY IN AN ORGANIZATION IF THAT ORGANIZATION WERE TO CHANGE TO A Z ENVIRONMENT VIA THE STEPS OF OUCHI'S THEORY Z.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL V36 N5

IRIS ACCESSION NUMBER: EW007857

PUBLICATION DATE: MAY 82

TITLE: MANAGEMENT ACTIONS TO SUPPORT TRANSFER OF TRAINING.

PERSONAL AUTHOR: BROAD, MARY L.

DESCRIPTOR: HUMAN RESOURCE DEVELOPMENT; *INSTRUCTION; *INSTRUCTIONAL IMPROVEMENT; *MANAGEMENT; *PROFESSIONAL DEVELOPMENT; *RESEARCH REPORTS; *STAFF DEVELOPMENT; *TRAINING; *TRANSFER OF TRAINING

DESCRIPTIVE NOTE: 124-130P.

ABSTRACT: REPORTS THE RESULTS OF A RESEARCH STUDY IN WHICH PROFESSIONALS IN HUMAN RESOURCE DEVELOPMENT WERE ASKED TO REVIEW A LIST OF 74 SUPPORT ACTIONS MANAGEMENT CAN TAKE TO SUPPORT THE TRANSFER OF TRAINING TO THE JOB, AND THEN IDENTIFY AND RATE THE IMPORTANCE OF EACH ACTION ACTUALLY OBSERVED IN ANY ORGANIZATION.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL V36 N5

IRIS ACCESSION NUMBER: EW007906

PUBLICATION DATE: FEB 81

TITLE: 1980 STATUS OF WASTEWATER FACILITIES.

DESCRIPTOR: *FACILITIES; *NEEDS ASSESSMENT; *OHIO RIVER VALLEY; *STATUS REPORTS; *SURVEYS; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 36P. PRICE: $3.00

ABSTRACT: THIS PUBLICATION PRESENTS THE RESULTS OF A SURVEY CONDUCTED ON THE STATUS OF WASTEWATER FACILITIES IN THE OHIO RIVER VALLEY REGION. THE DATA PROVIDE A COMPILATION OF WASTEWATER CONTROL FACILITIES DISCHARGING TO SURFACE WATERS WITHIN THE OHIO RIVER VALLEY AREA AND SERVE AS A RECORD OF BOTH ACCOMPLISHMENTS AND NEEDS FOR THE INSTALLATION AND UPGRADING OF SUCH FACILITIES.

AVAILABILITY: OHIO RIVER VALLEY WATER SANITATION COMMISSION, 414 WALNUT STREET, CINCINNATI, OH 45202

IRIS ACCESSION NUMBER: EW007919

PUBLICATION DATE: MAR 82

TITLE: MISSOURI TREATMENT PLANT WINS RECOGNITION.

DESCRIPTOR: *BIOLOGICAL TREATMENT; *CASE STUDIES; CONSTRUCTION; *DESIGN; ENGINEERING; *EQUIPMENT; *FACILITIES; *PILOT PLANTS; *RECYCLING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 27P.

ABSTRACT: THIS ARTICLE EXAMINES A PILOT WASTE TREATMENT PLANT THAT WAS NAMED ONE OF 1981'S TEN OUTSTANDING ENGINEERING ACHIEVEMENTS IN THE U.S. THIS INNOVATIVE DEMONSTRATION PLANT FEATURES A SIMPLE DESIGN WHICH IS MODULAR, SELF-CONTAINED, OPERATES INDEPENDENTLY AND HAS ONLY THREE PIECES OF MACHINERY WITH MOVING PARTS. THE ECONOMICAL DESIGN AND HIGH EFFLUENT WATER QUALITY ALSO ALLOWS FOR WASTEWATER REUSE.

AVAILABILITY: EPA JOURNAL, V8 N2

IRIS ACCESSION NUMBER: EW007920

PUBLICATION DATE: MAR 82

TITLE: SOME DRINKING WATER FILTERS FOUND EFFECTIVE.

DESCRIPTOR: *ACTIVATED CARBON; *CARBON FILTERS; CONTAMINANTS; *DRINKING WATER; *FILTERS; GROUNDWATER; *ORGANIC COMPOUNDS; *PERFORMANCE EVALUATION; *WATER TREATMENTS; *WATER QUALITY

DESCRIPTIVE NOTE: 32P.

ABSTRACT: THIS ARTICLE REPORTS ON A SERIES OF TESTS PERFORMED BY EPA THAT HAVE SHOWN THAT A NUMBER OF HOME DRINKING WATER FILTERS ARE HIGHLY EFFECTIVE IN REMOVING POTENTIALLY HARMFUL HALOGENATED ORGANIC CHEMICALS IN DRINKING WATER. THE TESTED FILTERS INCLUDED MANY VARIETIES RANGING FROM POUR-THROUGH MODELS TO LINE BY-PASS MODELS.

AVAILABILITY: EPA JOURNAL, V8 N2

IRIS ACCESSION NUMBER: EW007926

PUBLICATION DATE: JAN 82

TITLE: A SIMPLE NIGHT-TIME OIL SLICK DETECTOR.

PERSONAL AUTHOR: FINGAS, M. F.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EQUIPMENT; *INSTRUMENTATION; *MONITORING; *OIL SPILLS; *PERFORMANCE EVALUATION; *TECHNOLOGICAL ADVANCEMENTS; *ULTRA VIOLET LIGHT; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 21-29P.

ABSTRACT: THIS ARTICLE EXAMINES THE USE OF VARIOUS ULTRA-VIOLET RADIATION DEVICES TO DETECT OIL SLICKS AT NIGHT. ATTENTION IS FOCUSSED ON THE USE OF PORTABLE UV UNITS. DATA ARE PRESENTED FOR FLUORESCENT INTENSITIES OF VARIOUS OILS, DETECTION DISTANCES FOR ILLUMINATED OIL SPILLS, EQUIPMENT SPECIFICATIONS, AND POTENTIAL APPLICATIONS.

AVAILABILITY: SPILL TECHNOLOGY NEWSLETTER, V7 N1

IRIS ACCESSION NUMBER: EW007927

PUBLICATION DATE: SPR 82

TITLE: REPLACING WATER PIPE IN BUILT-UP AREAS.

PERSONAL AUTHOR: WEALL, A. J.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *INSTALLATION; *MAINTENANCE; *PIPES; PLANNING; *URBAN AREAS; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 2,8P.

ABSTRACT: THIS ARTICLE TAKES A COMPREHENSIVE LOOK AT THE REPLACEMENT OF WATER PIPES IN URBAN AREAS. AMONG THE DESIGN FACTORS DISCUSSED ARE: SELECTION OF PIPE, LOCATION OF PIPE BURIAL, DEALING WITH APPURTENANCES AND FITTINGS, THE GROUNDING OF ELECTRICAL SERVICES, AND OTHER GENERAL CONSIDERATIONS.

AVAILABILITY: UNI-BELL PVC PIPE NEWS, V5 N1

IRIS ACCESSION NUMBER: EW007928

PUBLICATION DATE: SPR 82

TITLE: VALUE ENGINEERING FOR WATER DISTRIBUTION/SEWAGE COLLECTION.

PERSONAL AUTHOR: WALKER, ROBERT P.

DESCRIPTOR: *COST EFFECTIVENESS; *DESIGN; ENGINEERING; PIPES; PLANNING; *SEWAGE SYSTEMS; *VALUE ENGINEERING; *WASTEWATER COLLECTION; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 4P.

ABSTRACT: THIS ARTICLE EXAMINES THE COMPONENTS AND APPLICATIONS OF VALUE ENGINEERING. VALUE ENGINEERING IS DEFINED AS A DISCIPLINED EFFORT TO ANALYZE THE FUNCTIONAL REQUIREMENTS OF A PROJECT OR PRODUCT FOR THE PURPOSE OF ACHIEVING THE ESSENTIAL FUNCTIONS AT THE LOWEST TOTAL COSTS. THE USE OF VALUE ENGINEERING IN PLANNING WATER DISTRIBUTION/SEWAGE COLLECTION SYSTEMS IN EXAMINED.

AVAILABILITY: UNI-BELL PVC PIPE NEWS, V5 N1

IRIS ACCESSION NUMBER: EW007929

PUBLICATION DATE: SPR 82

TITLE: TRANSIENT SURGE WAVE ANALYSIS - A PROGRAM FOR THE TEXAS INSTRUMENTS TI-59

PERSONAL AUTHOR: SIMON, BERND R.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CALCULATOR PROGRAMS; *CALCULATORS; *COMPUTER APPLICATIONS; *DATA ANALYSIS; *MATHEMATICAL APPLICATIONS; *PROGRAMMABLE CALCULATORS; *VALVES; *WATER DISTRIBUTION; *WATER HAMMER; *WAVE ANALYSIS

DESCRIPTIVE NOTE: 6P.

ABSTRACT: THIS ARTICLE DESCRIBES A PROGRAMMABLE CALCULATOR PROGRAM THAT IS DESIGNED TO PROVIDE TRANSIENT SURGE WAVE ANALYSIS FOR PVC PRESSURE WATER LINES. IT ALSO PROVIDES A DETAILED ANALYSIS OF WATER HAMMER CAUSED BY VALVE CLOSURE. A STEP-BY-STEP PROCEDURE FOR THE PROGRAM IS PROVIDED.

AVAILABILITY: UNI-BELL PVC PIPE NEWS, V5 N1

IRIS ACCESSION NUMBER: EW007930

PUBLICATION DATE: MAY 82

TITLE: MAINTENANCE OF ANALOG INSTRUMENT SYSTEMS.

PERSONAL AUTHOR: MOREY, E. F.
DESCRIPTOR: ANALOG INSTRUMENTS; *INSTRUMENTATION; *MAINTENANCE; *MANAGEMENT; *PREVENTIVE MAINTENANCE; *TECHNOLOGY

DESCRIPTIVE NOTE: R6-7P.

ABSTRACT: DISCUSSED BRIEFLY ARE ANALOG INSTRUMENT SYSTEMS AND MANAGEMENT AND TECHNICAL ASPECTS OF MAINTENANCE. INSTRUMENTS DISCUSSED INCLUDE TRANSMITTERS, RECEIVERS, CONTROLLERS, AND ANALYTICAL INSTRUMENTS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007931

PUBLICATION DATE: MAY 82

TITLE: HOW TO SET UP A PREVENTIVE MAINTENANCE PROGRAM.

PERSONAL AUTHOR: DAHL, B. W.

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *INVENTORY CONTROL; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PREVENTIVE MAINTENANCE; *RECORDS; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: R8-12P.

ABSTRACT: THIS ARTICLE PRESENTS SUGGESTIONS ON HOW TO ORGANIZE A PREVENTIVE MAINTENANCE PROGRAM FOR A WASTEWATER TREATMENT FACILITY. SAMPLE FORMS USED IN SUCH A PROGRAM ARE INCLUDED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007932

PUBLICATION DATE: MAY 82

TITLE: EFFECTIVE PROJECT MANAGEMENT.

PERSONAL AUTHOR: VAN MUNSTER, JOAN

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *FACILITIES; *MANAGEMENT; *PLANNING; *PROJECT PLANNING; *PROJECT DESCRIPTIONS; *PERFORMANCE EVALUATION; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: R17-22P.

ABSTRACT: THIS ARTICLE DESCRIBES A MANAGEMENT SYSTEM FOR EFFECTIVE PLANNING, DESIGN, CONSTRUCTION, AND STARTUP OF A WATER OR WASTEWATER FACILITY. FUNCTIONS OF KEY INDIVIDUALS, PHASES OF THE PROJECT, AND POTENTIAL PROBLEMS ARE CONSIDERED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007933

PUBLICATION DATE: MAY 82

TITLE: DRINKING WATER DISINFECTION.

PERSONAL AUTHOR: LONGLEY, KARL E.; ROBERTS, BILL

DESCRIPTOR: *CHLORINE; *CHLORINE DIOXIDE; *DISINFECTION; *DRINKING WATER; *OZONE; *RESEARCH; *TECHNOLOGY; *ULTRAVIOLET RADIATION; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: R26-30P.

ABSTRACT: DESCRIBED ARE SEVERAL PROCESSES FOR DISINFECTING DRINKING WATER. THE SELECTION OF A WATER DISINFECTANT AND ITS ACCOMPANYING EQUIPMENT AND CONTROL INSTRUMENTATION REQUIRES THE EVALUATION OF TREATMENT OBJECTIVES, WHICH INCLUDE THE INTERRELATED ENGINEERING, ECONOMIC, OPERATION, HEALTH AND SAFETY CONSIDERATIONS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007934

PUBLICATION DATE: MAY 82

TITLE: PROCESSES FOR REMOVAL OF INORGANIC CONTAMINANTS FROM WATER.

PERSONAL AUTHOR: CLIFFORD, DENNIS

DESCRIPTOR: *CONTAMINANT REMOVAL; *CONTAMINANTS; *DRINKING WATER; *INORGANIC CONTAMINANTS; *METALS; *OPERATIONS (WATER); *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: R31-38P.

ABSTRACT: MANY COMMUNITIES HAVE WATER SUPPLIES THAT CONTAIN INORGANIC CONTAMINANTS. TWO TYPES OF PROCESSES CAN BE CONSIDERED FOR REMOVAL OF IONS: SINGLE CONTAMINANT REMOVAL PROCESSES AND DESALTING PROCESSES. THIS ARTICLE CONSIDERS THE BASIC CONCEPTS AND LIMITATIONS OF BOTH PROCESSES.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007935

PUBLICATION DATE: MAY 82

TITLE: DESIGN CONSIDERATIONS IN WATERWORKS PUMPS SELECTION.

PERSONAL AUTHOR: KRUTZSCH, WILLIAM C.

DESCRIPTOR: *DESIGN; *ECONOMICS; *EQUIPMENT; *MAINTENANCE; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *PUMPS; *PUMP SELECTION; *RELIABILITY; *WATER TREATMENT; *WATER PUMPS

DESCRIPTIVE NOTE: R40-43P.

ABSTRACT: THIS ARTICLE PRESENTS DESIGN CONSIDERATIONS TO USE IN THE SELECTION OF PUMPS FOR WATERWORKS. FIGURES AND TABLES ARE GIVEN TO HELP EXPLAIN AND ILLUSTRATE PUMP SELECTION.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007936

PUBLICATION DATE: MAY 82

TITLE: ROTATING BIOLOGICAL CONTACTOR SCALE-UP AND DESIGN.

PERSONAL AUTHOR: STOVER, ENOS L.; KINCANNON, DON F.

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *DESIGN; *EQUIPMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: R48-54P.

ABSTRACT: A TOTAL ORGANIC LOADING APPROACH TO DESIGN AND SCALE-UP OF ROTATING BIOLOGICAL CONTACTORS (RBCS) IS PRESENTED IN DETAIL AND COMPARED TO OTHER DESIGN APPROACHES. TO EFFECTIVELY ACCOMPLISH SCALE-UP OF RBCS FROM PILOT DATA, THE OXYGEN TRANSFER CAPABILITIES AND LIMITATIONS OF THE FULL SCALE SYSTEM MUST BE DEFINED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007937

PUBLICATION DATE: MAY 82

TITLE: VARIABLE FREQUENCY DRIVES--SOME APPLICATION PRINCIPLES.

PERSONAL AUTHOR: HAMILTON, RICHARD N.

DESCRIPTOR: *DESIGN; *EFFICIENCY; *INSTRUMENTATION; *MOTORS; *MAINTENANCE; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; PUMPS; *VARIABLE FREQUENCY DRIVES; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: R55-60P.

ABSTRACT: THE TREATMENT OF WATER (BOTH PRIOR TO AND AFTER ITS USE) AND ITS TRANSPORT, OFFER MANY USES FOR VARIABLE-FREQUENCY DRIVES IN PUMPING, COOLING, HEATING, CONVEYING, PROPORTIONING, AND AERATION PROCESS. THIS ARTICLE PRESENTS SOME PRINCIPLES RELATED TO THE APPLICATION OF THESE DRIVES. SEVERAL FIGURES ARE INCLUDED TO ILLUSTRATE THE DISCUSSION.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007938

PUBLICATION DATE: MAY 82

TITLE: SELECTION OF A SLUDGE HANDLING DISPOSAL SYSTEM.

PERSONAL AUTHOR: HESS, ALAN F.; BARNES, MICHAEL J.

DESCRIPTOR: BIBLIOGRAPHIES; *DESIGN; *ECONOMICS; *ENERGY CONSERVATION; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *SLUDGE; *SLUDGE DISPOSAL; *SYSTEM DESIGN; *WASTE DISPOSAL; *WATER TREATMENT

DESCRIPTIVE NOTE: R61-67P.

ABSTRACT: THIS ARTICLE CONSIDERS A NUMBER OF VARIABLES TO CONSIDER IN THE SELECTION OF A SLUDGE HANDLING DISPOSAL SYSTEM FOR A WATER TREATMENT PLANT. A SELECTED BIBLIOGRAPHY IS INCLUDED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007939

PUBLICATION DATE: MAY 82

TITLE: DESIGN AND OPERATION OF ANAEROBIC SLUDGE DIGESTION SYSTEMS.

PERSONAL AUTHOR: GARRISON, WALTER E.; AND OTHERS

DESCRIPTOR: *ANAEROBIC SLUDGE DIGESTION; *CONSTRUCTION; *DESIGN; *ECONOMICS; *ENERGY CONSERVATION; *FACILITIES; *OPERATIONS (WASTEWATER); *SLUDGE; *SYSTEM DESIGN; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: R68-72P.

ABSTRACT: THIS ARTICLE PRESENTS INFORMATION RELATED TO THE DESIGN AND OPERATION OF AN ANAEROBIC SLUDGE DIGESTION SYSTEM IN LOS ANGELES COUNTY (CALIFORNIA). THE SYSTEM HAS PROVIDED A NUMBER OF BENEFITS INCLUDING ENERGY RETURN AND HAS BEEN SAFE AND RELIABLE.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007940

PUBLICATION DATE: MAY 82

TITLE: THE FIVE-YEAR WATER/ENGINEERING & MANAGEMENT INDEX.

DESCRIPTOR: *BIBLIOGRAPHIES; *INSTRUMENTATION; *MANAGEMENT; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *SLUDGE; *TRAINING; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *WATER DISTRIBUTION; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: R87-102P.

ABSTRACT: THIS INDEX LISTS ARTICLES THAT HAVE APPEARED IN WATER AND SEWAGE WORKS MAGAZINE AND THE ANNUAL REFERENCE HANDBOOK FOR THE YEARS 1977-81. ARTICLES RELATED TO WATER INCLUDE REFERENCES ON MANAGEMENT, SUPPLY AND RESOURCE, TREATMENT, DISTRIBUTION AND INSTRUMENTATION. ARTICLES RELATED TO WASTEWATER INCLUDE REFERENCES ON MANAGEMENT, COLLECTION, TREATMENT, SLUDGE MANAGEMENT, INSTRUMENTATION, LABORATORY, AND TRAINING.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT REFERENCE HANDBOOK 82

IRIS ACCESSION NUMBER: EW007941

PUBLICATION DATE: JAN 82

TITLE: MICROCOMPUTERS IN EDUCATION: AN INTRODUCTION.

PERSONAL AUTHOR: NAIMAN, ADELINE

DESCRIPTOR: *COMPUTERS; *EDUCATIONAL TECHNOLOGY; *GUIDES; *INSTRUCTIONAL MATERIALS; *MICROCOMPUTERS; *PLANNING; PROGRAM DEVELOPMENT; TEACHER EDUCATION

DESCRIPTIVE NOTE: 76P. PRICE: $14.00

ABSTRACT: THIS PUBLICATION IS A GUIDE TO THE USE OF MICROCOMPUTERS IN LOCAL PUBLIC SCHOOL DISTRICTS. THE GUIDE IS WRITTEN FOR TEACHERS, ADMINISRATORS, AND PARENTS TO HELP IN PLANNING AND EVALUATING DISTRICT NEEDS. TOPICS ADDRESSED INCLUDE: NEED FOR PLANNING; STATE POLICIES, PRACTICES AND SERVICES; APPLICATIONS OF MICROCOMPUTERS IN SCHOOLS; INFORMATION SOURCES, HARDWARE AND SOFTWARE; TEACHER EDUCATION; AND, PROGRAM EVALUATION.

AVAILABILITY: TECHNICAL EDUCATION RESEARCH CENTER, 8 ELIOT STREET, CAMBRIDGE, MA 02138

IRIS ACCESSION NUMBER: EW007950

PUBLICATION DATE: JUN 82

TITLE: PUT PRESSURE ON SEWAGE.

PERSONAL AUTHOR: RYDLAND, L. N.

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *GRINDER PUMPS; *PUMPS; RURAL AREAS; *SEPTIC TANKS; *SEWERS; *TECHNOLOGICAL ADVANCEMENTS; TECHNOLOGY; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 47-48P.

ABSTRACT: THIS ARTICLE EXAMINES TWO NEW SEWER TECHNOLOGIES: (1) ON-LOT PRESSURIZATION FACILITIES TO PUMP LIQUID WASTES FROM THE HOME, AND (2) PRESSURE SEWER SYSTEMS TO CONVEY THESE WASTES FROM THE RESIDENCE EITHER INTO AN EXISTING SEWER OR DIRECTLY TO A WASTEWATER TREATMENT PLANT. ATTENTION IS FOCUSED ON THE SEPTIC TANK EFFLUENT PUMP SYSTEM AND THE GRINDER PUMP SYSTEMS.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N6

IRIS ACCESSION NUMBER: EW007951

PUBLICATION DATE: JUN 82

TITLE: PHILADELPHIA SPREADS ITS WEALTH AROUND.

DESCRIPTOR: *CASE STUDIES; *LAND APPLICATION; MANAGEMENT; *OPERATIONS (WASTEWATER); *PENNSYLVANIA; *SLUDGE; *SLUDGE DISPOSAL; *WASTEWATER TREATMENT; *WASTE DISPOSAL; WASTE MANAGEMENT

DESCRIPTIVE NOTE: 69-70P.

ABSTRACT: THIS ARTICLE EXAMINES HOW THE CITY OF PHILADELPHIA DISPOSES OF ITS SLUDGE THROUGH A COMPREHENSIVE LAND APPLICATION PROGRAM. THE CITY HAS CONTRACTED FOR THE HAUL-OUT OF UP TO 100,000 GPD OF LIQUID SLUDGE FOR USE ON FARMS, PARKS, GOLF COURSES, AND REDEVELOPED AREAS.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N6

IRIS ACCESSION NUMBER: EW008035

PUBLICATION DATE: MAR 80

TITLE: INTERVIEWS. FLORIDA: PUBLIC PARTICIPATION COMMITTEE; NORTH DAKOTA: EFFECTIVE USE OF VISUAL AIDS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CITIZEN INVOLVEMENT; *COMMUNICATIONS; *FLORIDA; *HIGHWAY DEVELOPMENT; *NORTH DAKOTA; PLANNING; PUBLIC MEETINGS; *STATE PLANS

DESCRIPTIVE NOTE: 27P.

ABSTRACT: THIS PUBLICATION PRESENTS TWO INTERVIEWS ON TOPICS RELATING TO INNOVATIVE TECHNIQUES AND PROCEDURES THAT ASSURE THE CONSIDERATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL EFFECTS IN HIGHWAY DEVELOPMENT. THE FIRST INTERVIEW ADDRESSES THE ROLE OF PUBLIC PARTICIPATION IN FORMULATING THE FLORIDA STATE ACTION PLAN FOR HIGHWAY DEVELPMENT. THE SECOND EXAMINES THE EFFECTIVE USE OF VISUAL AIDS IN PUBLIC MEETINGS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW008048

PUBLICATION DATE: 82

TITLE: WATER SUPPLY AND TREATMENT.

DESCRIPTOR: *DRINKING WATER; *EQUIPMENT; *FACILITIES; *MAINTENANCE; *OPERATION (WATER); *STATE-OF-THE-ART REVIEWS; *WATER QUALITY; *WATER RESOURCES; WATER STORAGE; *WATER TREATMENT

ABSTRACT: THIS REPORT PRESENTS A COMPREHENSIVE EXAMINATION AND STATE-OF-THE-ART REVIEW OF WATER SUPPLY AND TREATMENT. TOPICS ADDRESSED INCLUDE: RAW WATER PREPARATION; FILTRATION; SOFTENING, IRON, AND MANGANESE REMOVAL; DISINFECTION, TASTE, AND ODOR CONTROL; MAINS AND SERVICES; PUMPS AND MOTORS; VALVES AND HYDRANTS; WATER STORAGE; METERING, MONITORING AND QUALITY CONTROL; AND, SYSTEM MAINTENANCE.

AVAILABILITY: 1982 PUBLIC WORKS MANUAL, C-2-C-74

IRIS ACCESSION NUMBER: EW008049

PUBLICATION DATE: 82

TITLE: WATER POLLUTION CONTROL.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); *POLLUTION CONTROL; *STATE-OF-THE-ART REVIEWS; *WASTEWATER TREATMENT; WATER QUALITY; WATER RESOURCES

ABSTRACT: THIS REPORT PRESENTS A COMPREHENSIVE EXAMINATION AND STATE-OF-THE-ART REVIEW OF WATER POLLUTION CONTROL AND ABATEMENT. TOPICS ADDRESSED INCLUDE: COLLECTION SYSTEMS; PUMPS AND VALVES; PRIMARY TREATMENT; SECONDARY TREATMENT; ADVANCED TREATMENT; SLUDGE DIGESTION AND DISPOSAL; DISINFECTION, ODOR PREVENTION AND CONTROL; OPERATION CONTROL; SEWER MAINTENANCE AND REHABILITATION; AND, CONTROL OPERATIONS AND MAINTENANCE SERVICES.

AVAILABILITY: 1982 PUBLIC WORKS MANUAL, D-2-D-71

IRIS ACCESSION NUMBER: EW008050

PUBLICATION DATE: JUL 82

TITLE: WATER SYSTEMS NEED TO PREPARE FOR EMERGENCIES.

PERSONAL AUTHOR: HERMAN, ROGER E.

DESCRIPTOR: *DRINKING WATER; *EMERGENCIES; *EMERGENCY PLANS; *PLANNING; *UTILITIES; *WATER SUPPLY; *WATER SYSTEMS; *WATER TREATMENT; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 48-49P.

ABSTRACT: CONTENTS AND ORGANIZATION OF A WATER SYSTEM EMERGENCY PLAN ARE DISCUSSED.

AVAILABILITY: PUBLIC WORKS V113 N7

IRIS ACCESSION NUMBER: EW008051

PUBLICATION DATE: JUL 82

TITLE: WATERTIGHT MANHOLES CUT INFLOW.

DESCRIPTOR: *CASE STUDIES; *INFLOW; *INFLOW PREVENTION; *MAINTENANCE; *MANHOLES; *SEWERS; *TEXAS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 52P.

ABSTRACT: DURING REHABILITATION OF A SEWER SYSTEM, INSERTS WERE ADDED TO REBUILD MANHOLES AND CUT INFLOW.

AVAILABILITY: PUBLIC WORKS V113 N7

IRIS ACCESSION NUMBER: EW008052

PUBLICATION DATE: JUL 82

TITLE: A CASE FOR REGIONAL SLUDGE MANAGEMENT.

PERSONAL AUTHOR: ALLEN, RICHARD K.

DESCRIPTOR: *CASE STUDIES; *COSTS; *FACILITIES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PLANNING; *REGIONAL PLANNING; *SLUDGE; *SLUDGE

DISPOSAL; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 59-62P.

ABSTRACT: PROBLEMS IN SLUDGE MANAGEMENT LED TO HAULING OF LIQUID SLUDGE FROM A SMALL PLANT TO A LARGER FACILITY.

AVAILABILITY: PUBLIC WORKS V113 N7

IRIS ACCESSION NUMBER: EW008053

PUBLICATION DATE: JUL 82

TITLE: COUNTY PROVIDES A RURAL WATER SUPPLY SYSTEM.

PERSONAL AUTHOR: BERSCHAUER, WALTER L.; MILLER, NOEL

DESCRIPTOR: *CASE STUDIES; *DRINKING WATER; *RURAL AREAS; *UTILITIES; *WASHINGTON; *WATER SUPPLY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 63-65P.

ABSTRACT: A LOCAL UTILITY DISTRICT HAS PROVIDED WATER TO A RURAL AREA WHERE PRIVATE WELLS ARE UNPRODUCTIVE.

AVAILABILITY: PUBLIC WORKS V113 N7

IRIS ACCESSION NUMBER: EW008054

PUBLICATION DATE: JUL 82

TITLE: STORMWATER MANAGEMENT IN A SENSITIVE AREA.

DESCRIPTOR: *DRINKING WATER; *FILTRATION SYSTEMS; *FLORIDA; *NONPOINT SOURCE POLLUTION; *SALTWATER INTRUSION; *SURFACE RUNOFF; *STORMWATER; *WATER; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 67P.

ABSTRACT: DESCRIBED IS A SYSTEM TO PROTECT A COASTAL COMMUNITY'S FRESH WATER SUPPLY FROM SALT WATER INTRUSION.

AVAILABILITY: PUBLIC WORKS V113 N7

IRIS ACCESSION NUMBER: EW008055

PUBLICATION DATE: JUL 82

TITLE: COMPONENTS FOR A TREATMENT PLANT SAFETY PROGRAM.

PERSONAL AUTHOR: GERARDI, MICHAEL H.

DESCRIPTOR: *ACCIDENT PREVENTION; *ATTITUDES; *EDUCATION; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PROGRAM DESCRIPTIONS; *SAFETY; *SAFETY EDUCATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 68-69P.

ABSTRACT: THE ORIGIN AND GROWTH OF A COMPREHENSIVE WASTEWATER TREATMENT PLANT SAFETY PROGRAM ARE REVIEWED.

AVAILABILITY: PUBLIC WORKS V113 N7

IRIS ACCESSION NUMBER: EW008056

PUBLICATION DATE: JUL 82

TITLE: TRAINING THOSE WHO DESIGN TRAINING PROGRAMS.

PERSONAL AUTHOR: HAMILTON, JACK A.

DESCRIPTOR: *CURRICULUM DEVELOPMENT; *OCCUPATIONAL EDUCATION; *INSTRUCTION; *INDUSTRIAL EDUCATION; *INSTRUCTIONAL MATERIALS; *MODULES; *POST SECONDARY EDUCATION; *VOCATIONAL EDUCATION; *UNITS OF STUDY

DESCRIPTIVE NOTE: 36-43P.

ABSTRACT: THE TRAINING PROGRAM DESCRIBED IN THIS ARTICLE CONSISTS OF PROFESSIONAL DEVELOPMENT RESOURCES FOR THOSE WHO WANT TO BUILD SKILLS IN CURRICULUM DEVELOPMENT. EACH OF THE MODULES IN THE TRAINING PROGRAM PROVIDES A CONCISE PRESENTATION OF MEASURABLE OBJECTIVES, ACTIVITIES AND INFORMATION THAT CAN STAND ALONE OR SERVE AS A FOUNDATION TO WHICH OTHER ACTIVITIES AND READINGS CAN BE ADDED.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL V36 N7

IRIS ACCESSION NUMBER: EW008057

PUBLICATION DATE: JUL 82

TITLE: THE TRAINER AS "SCAPEGOAT".

PERSONAL AUTHOR: HULTMAN, KENNETH E.

DESCRIPTOR: *INSTRUCTION; *LEARNING; *PLANNING; *PROBLEMS; *TRAINERS; *WORKSHOPS

DESCRIPTIVE NOTE: 44-53P.

ABSTRACT: THIS ARTICLE PRESENTS TIPS FOR THE TRAINER ON HOW TO BE PREPARED FOR WORKSHOPS AND HOW TO AVOID PROBLEMS. CAUSES OF PROBLEMS ARE LISTED AND STRATEGIES TO DEAL WITH THE CAUSES AND BEHAVIOR ARE DETAILED.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL V36 N7

IRIS ACCESSION NUMBER: EW008058

PUBLICATION DATE: JUL 82

TITLE: INCORPORATING LEARNING STYLE INTO TRAINING DESIGN.

PERSONAL AUTHOR: DIXON, NANCY

DESCRIPTOR: COURSE CONTENT; EVALUATION; *INSTRUCTION; *LEARNING; *LEARNING STYLES; PLANNING; *TRAINING

DESCRIPTIVE NOTE: 62-64P.

ABSTRACT: A FEW HOURS SPENT DISCUSSING LEARNING STYLE CAN LEAD WORKSHOP PARTICIPANTS TO IMPROVED ABILITY TO LEARN. FOUR MAJOR CONSIDERATIONS SHOULD BE TAKEN INTO ACCOUNT: CONTENT, EXTERNAL CONSTRAINTS, SKILLS AND PREFERENCES OF THE FACULTY, AND LEARNING STYLES OF PARTICIPANTS.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL V36 N7

IRIS ACCESSION NUMBER: EW008059

PUBLICATION DATE: JUL 82

TITLE: MANAGING CONFLICT IN TODAY'S ORGANIZATIONS.

PERSONAL AUTHOR: LIPPITT, GORDON L.

DESCRIPTOR: *ATTITUDES; *CONFLICT RESOLUTION; *MANAGEMENT; *MORALE

DESCRIPTIVE NOTE: 67-74P.

ABSTRACT: ONE OF THE KEY ELEMENTS IN MODERN MANAGEMENT IS THE REALIZATION THAT CONFLICT MANAGEMENT AND RESOLUTION HAS BECOME AN INCREASINGLY RELEVANT COMPETENCY OF ORGANIZATIONAL MANAGERS. THE ROLE OF ORGANIZATIONAL LEADERSHIP IS NOT TO ELIMINATE CONFLICT, BUT TO USE IT TO TURN RELEASED ENERGIES TO GOOD ADVANTAGE.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL V36 N7

IRIS ACCESSION NUMBER: EW008060

PUBLICATION DATE: JUL 82

TITLE: A SELF-EXAMINATION FOR TRAINING DEVELOPERS.

PERSONAL AUTHOR: ROMINES, JACK A.; CRUMP, BILL

DESCRIPTOR: *COST EFFECTIVENESS; *CURRICULUM DEVELOPMENT; *DESIGN; *EVALUATION; *GOALS; *OBJECTIVES; *PLANNING; *TRAINING

DESCRIPTIVE NOTE: 76-85P.

ABSTRACT: THIS TRAINER'S AID IS DESIGNED TO HELP PLANNING AND CONTROLLING THE TRAINING DEVELOPMENT PROCESS.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL V36 N7

IRIS ACCESSION NUMBER: EW008061

PUBLICATION DATE: JUN 82

TITLE: ANALYSIS OF ORGANIC MICRO-POLLUTANTS IN WATER.

PERSONAL AUTHOR: BJORSETH, A.; ANGELETTI, G.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; COMPUTER APPLICATIONS; *CONFERENCE PROCEEDINGS; GAS CHROMATOGRAPHY; *LABORATORY PROCEDURES; MASS SPECTROMETRY; *MICROPOLLUTANTS; *ORGANIC COMPOUNDS; *POLLUTANTS; SAMPLING; *STATE-OF-THE-ART REVIEWS; *WATER QUALITY

DESCRIPTIVE NOTE: 366P. PRICE: $49.50

ABSTRACT: THIS BOOK REVIEWS CURRENT STATE-OF-THE-ART OF ANALYTICAL TECHNIQUES RELATING TO THE DETERMINATION OF ORGANIC MICROPOLLUTANTS IN WATER. THE CONTENTS CONTAINS THE PROCEEDINGS OF THE SECOND EUROPEAN SYMPOSIUM ON ORGANIC MICROPOLLUTANTS IN WATER. PAPERS PRIMARILY CONCERN SAMPLING AND ANALYTICAL TECHNIQUES, INCLUDING GAS CHROMATOGRAPHY, AND MASS SPECTROMETRY WITH COMPUTER DATA HANDLING.

AVAILABILITY: KLUWER BOSTON, INC., 1900 DERBY STREET, HINGHAM, MA 02043

IRIS ACCESSION NUMBER: EW008062

PUBLICATION DATE: 80

TITLE: COMPUTER ASSISTED LEARNING IN PHYSICS EDUCATION.

PERSONAL AUTHOR: BORK, A.

DESCRIPTOR: *COLLEGE SCIENCE; *COMPUTER ASSISTED INSTRUCTION; *COMPUTERS; *COMPUTER SOFTWARE; *EDUCATIONAL TECHNOLOGY; HIGHER EDUCATION; *INSTRUCTIONAL MATERIALS; *LEARNING; *SCIENCE INSTRUCTION; PHYSICAL SCIENCES; *PHYSICS; *PROGRAMMED INSTRUCTION; *SCIENCE EDUCATION

DESCRIPTIVE NOTE: 90P. PRICE: $23.50

ABSTRACT: THIS PUBLICATION IS CONCERNED WITH THE USE OF COMPUTERS IN LEARNING PHYSICS. WITH THE EXCEPTION OF A PAPER ABOUT CONDUIT, ALL THE CONTRIBUTIONS REPORT ON CURRENT WORK BASED ON A VARIETY OF APPROACHES AND PHILOSOPHICAL POSITIONS. THE CONDUIT PAPER DESCRIBES THE MOST SUCCESSFUL PRESENT DISTRIBUTION METHOD, WITH PARTICULAR REFERENCE TO PHYSICS.

AVAILABILITY: PERGAMON PRESS, FAIRVIEW PARK, ELMSFORD, NY 10523

IRIS ACCESSION NUMBER: EW008063

PUBLICATION DATE: 80

TITLE: WATER MANAGEMENT UNDER CONDITIONS OF SCARCITY.

PERSONAL AUTHOR: SHYVAL, HILLEL I.

DESCRIPTOR: AGRICULTURE; CONSERVATION; DESALINATION; DROUGHT; GROUNDWATER; *MANAGEMENT; *NATURAL RESOURCES; *PLANNING; PUBLIC HEALTH; *RECYCLING; WASTEWATER REUSE; *WATER CONSERVATION; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 352P. PRICE: $38.00

ABSTRACT: THIS BOOK IS A COMPILATION OF STUDIES OF THE PROBLEMS ENCOUNTERED IN AN AREA WHERE, OVER THE PAST 30 YEARS, A SEVERE WATER RESOURCE SCARCITY HAS DEVELOPED. THE BASIC SOLUTIONS TO THE PROBLEM IN ISRAEL THAT ARE CONSIDERED IN THIS BOOK ARE: (1) MASSIVE REUSE OF MUNICIPAL WASTEWATER; (2) INTENSIFIED MINING OF GROUNDWATER; (3) CURTAILMENT OF SUPPLIES (MAINLY TO THE AGRICULTURAL SECTOR); AND, (4) LARGE-SCALE SEAWATER DESALINATION.

AVAILABILITY: ACADEMIC PRESS, INC., 111 FIFTH AVENUE, NEW YORK, NY 10003

IRIS ACCESSION NUMBER: EW008064

PUBLICATION DATE: 82

TITLE: STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER 15TH EDITION.

PERSONAL AUTHOR: GREENBERG, ARNOLD E.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; EVALUATION; *LABORATORY PROCEDURES; LABORATORY SAFETY; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *REGULATIONS; *SAMPLING; *STANDARDS; *TESTING; *WATER TREATMENT; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: PRICE: $50.00

ABSTRACT: THIS BOOK PROVIDES COMPREHENSIVE AND DETAILED GUIDELINES FOR THE ANALYSIS OF WATER AND WASTEWATER. THIS EDITION PRESENTS THE LATEST ADVANCES IN ANALYSIS TECHNOLOGY. THE METHODS PRESENTED ARE BELIEVED TO BE THE BEST AVAILABLE AND ACCEPTED PROCEDURES. MAJOR REVISIONS INCLUDE EMPHASIS ON LABORATORY SAFETY AND QUALITY ASSURANCE, REVISED SECTIONS ON BOD, FLOATABLES, RADIOCHEMISTRY, HALOGENATED METHANE, AND RAPID MICROBIOLOGICAL TECHNIQUES.

AVAILABILITY: PUBLICATIONS ORDER DEPT., WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008065

PUBLICATION DATE: 82

TITLE: HANDLING CHEMICALS SAFELY.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMICALS; *GUIDES; *HANDLING; *HAZARDOUS MATERIALS; *LABORATORY SAFETY; *MANUALS; *SAFETY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 1013P.

ABSTRACT: THIS REFERENCE MANUAL PROVIDES A COMPREHENSIVE GUIDE FOR THE SAFE HANDLING OF CHEMICALS IN THE LABORATORY. INCLUDED ARE DETAILED SAFETY DATA PROFILES FOR 874 CHEMICALS. THE FOLLOWING INFORMATION IS PROVIDED WHERE APPLICABLE FOR EACH CHEMICAL: NAME, SYNONYMS, NFPA VALUES, CAS NUMBER, UN NUMBER, PHYSICAL PROPERTIES, CHARACTERISTICS, MAXIMUM ALLOWABLE CONCENTRATION, FIRE AND EXPLOSION HAZARDS, SYMPTOMS, HAZARD PREVENTION, FIRE FIGHTING, FIRST AID, SPILLAGE, STORAGE, PACKAGING, LABELING, AND NOTES.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008066

PUBLICATION DATE: 80

TITLE: HAZARDOUS CHEMICALS DATA BOOK.

PERSONAL AUTHOR: WEISS, G.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMICALS; *GUIDES; *HAZARDOUS MATERIALS; *INFORMATION SOURCES; *LABORATORY SAFETY; *MANUALS; *SAFETY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 1188P. PRICE: $71.00

ABSTRACT: THIS BOOK IS A COMPREHENSIVE COMPENDIUM OF DATA SHEETS ON OVER 1350 HAZARDOUS CHEMICALS. THE VOLUME HAS TWO SECTIONS ALPHABETICALLY ARRANGED. THE FIRST SECTION IS BASED ON THE DEPARTMENT OF TRANSPORTATION'S CHEMICAL HAZARD RESPONSE INFORMATION SYSTEM. THE SECOND SECTION IS BASED ON MATERIAL SAFETY DATA SHEETS OBTAINED FROM THE OAK RIDGE NATIONAL SAFETY LABORATORY. DATA INCLUDES: SYNONYMS, TOXIC INFORMATION, HEALTH HAZARDS, FIRE HAZARDS, REACTIVITY HAZARDS, WATER POLLUTION DATA, SHIPPING INFORMATION, LABEL REQUIREMENTS, AND WATER SPILL PROCEDURES.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008067

PUBLICATION DATE: 79

TITLE: THE HANDBOOK OF REACTIVE CHEMICALS HAZARDS, 2ND EDITION.

PERSONAL AUTHOR: BRETHERICK, L.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMICALS; *GUIDES; *HANDBOOKS; *HANDLING; *HAZARDOUS MATERIALS; INFORMATION SOURCES; *INSTRUCTIONAL MATERIALS; *LABORATORY SAFETY; *POST SECONDARY EDUCATION; *SAFETY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 1281P. PRICE: $165.00

ABSTRACT: THIS HANDBOOK PROVIDES INFORMATION ON CHEMICAL

SAFETY FOR INDUSTRIAL AND RESEARCH LABORATORIES. OVER 7000 ENTRIES ARE INCLUDED, MOST WITH CHEMICAL STRUCTURAL FORMULAS. THEIR REACTIONS UNDER VARYING CONDITIONS AND INTERACTIONS WITH OTHER FORMULAS ARE DESCRIBED AND DOCUMENTED. ALSO OFFERS DOCUMENTATION OF SPECIFIC HAZARDS AND DESCRIBES CONDITIONS UNDER WHICH ACCIDENTS HAVE OCCURRED. LISTS PROPERTIES OF HIGHLY FLAMMABLE GASES AND LIQUIDS.

AVAILABILITY: LAB SAFETY SUPPLY, P.O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008068

PUBLICATION DATE: 81

TITLE: MANAGING HAZARDOUS SUBSTANCES ACCIDENTS.

PERSONAL AUTHOR: SMITH, AL J., JR.

DESCRIPTOR: *ACCIDENT RESPONSE; *ACCIDENTS; *CHEMICALS; GUIDES; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *PLANNING; *SAFETY; *SPILLS; TECHNOLOGY; *TOXIC SUBSTANCES; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 188P. PRICE: $27.50

ABSTRACT: THIS BOOK SHOWS HOW TO DEVELOP A MANAGEMENT SYSTEM TO COORDINATE ACTIVITIES AT THE SCENE OF A SPILL. TOPICS INCLUDE CONTINGENCY PLANNING, HOW TO USE TOOLS AND TECHNIQUES NOW AVAILABLE, WHERE TO GET TECHNOLOGY, THE LATEST CLEAN-UP TECHNOLOGY, AND TRAINING AND EDUCATION PROGRAMS. RELEVANT LAWS AND GOVERNMENTAL LEVELS OF INTEREST IN HAZARDOUS SUBSTANCES ACCIDENTS ARE OUTLINED.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008069

PUBLICATION DATE: 82

TITLE: HAZARDOUS MATERIALS SPILLS HANDBOOK.

PERSONAL AUTHOR: BENNETT, G. F.; AND OTHERS

DESCRIPTOR: *ACCIDENT RESPONSE; *ACCIDENTS; *CHEMICALS; GUIDES; *HANDBOOKS; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *PLANNING; *SAFETY; *SPILLS; TECHNOLOGY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 704P. PRICE: $54.50

ABSTRACT: THIS COMPREHENSIVE HANDBOOK TREATS ALL ASPECTS OF HAZARDOUS MATERIAL SPILLS, FROM REGULATIONS SURROUNDING A SPILL TO THE ACTUAL ORGANIZATION OF A CLEAN-UP. FEATURES INCLUDE: RESPONSE PLANS, SPILLS IN WATER, SPILL CLEAN-UP, PERSONAL SAFETY, CASE HISTORIES, VOLATILE MATERIALS, AND ULTIMATE DISPOSAL.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008070

PUBLICATION DATE: 81

TITLE: HOW TO DISPOSE OF OIL AND HAZARDOUS CHEMICAL SPILL DEBRIS.

PERSONAL AUTHOR: BRUEL, A.

DESCRIPTOR: ACCIDENT RESPONSE; *CASE STUDIES; *CHEMICALS; EQUIPMENT; *GUIDES; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *OIL SPILLS; PLANNING; PROGRAM DESCRIPTIONS; *POST SECONDARY EDUCATION; *SPILLS; TECHNOLOGY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 420P. PRICE: $53.50

ABSTRACT: THIS BOOK DESCRIBES VARIOUS TECHNIQUES FOR DISPOSAL OF COLLECTED DEBRIS FROM OIL AND HAZARDOUS CHEMICAL SPILLS. ENGINEERING CONSTRAINTS AND EQUIPMENT REQUIREMENTS FOR HANDLING AND DISPOSAL ARE EVALUATED. A LITERATURE REVIEW AND SEVERAL CASE STUDIES ARE ALSO INCLUDED.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008071

PUBLICATION DATE: 81

TITLE: PESTICIDE DISPOSAL AND DETOXIFICATION.

PERSONAL AUTHOR: DILLON, A. P.

DESCRIPTOR: *DETOXIFICATION; *DISPOSAL METHODS; *INCINERATION; *INSTRUCTIONAL MATERIALS; *LAND DISPOSAL; *PESTICIDES; *POST SECONDARY EDUCATION; *RESEARCH REPORTS; *STATE-OF-THE-ART REVIEWS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 587P. PRICE: $53.50

ABSTRACT: THIS BOOK DISCUSSES CURRENT STATE-OF-THE-ART DISPOSAL AND DETOXIFICATION METHODS FOR PESTICIDES AND THEIR DILUTE SOLUTIONS. ALSO DISCUSSED ARE RECENT AND ON-GOING RESEARCH ON GENERAL DISPOSAL TECHNIQUES INCLUDING INCINERATION, BIOLOGICAL, PHYSICAL AND CHEMICAL METHODS, LAND DISPOSAL, AS WELL AS SPECIFIC DISPOSAL PROCESSES FOR SELECTED PESTICIDES.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

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IRIS ACCESSION NUMBER: EW008072
PUBLICATION DATE: 82

TITLE: HAZARD ASSESSMENT OF CHEMICALS, VOLUME 1.

PERSONAL AUTHOR: SAXENA, J.; FISHER, F.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC ENVIRONMENTS; *CHEMICALS; *ENVIRONMENTAL CHEMISTRY; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; POLLUTANTS; *POST SECONDARY EDUCATION; TOXICOLOGY; *TOXIC SUBSTANCES; TRACE METALS; *WATER QUALITY

DESCRIPTIVE NOTE: 480P. PRICE: $49.50

ABSTRACT: THIS BOOK IS THE FIRST IN A SERIES OF COMPREHENSIVE REVIEWS IN THE AREA OF HAZARDOUS CHEMICALS ASSESSMENT. DISCUSSED ARE TOXIC SUBSTANCES INFORMATION SOURCES, TRACE METALS FROM AQUATIC SAMPLES, XENOBIOTICS, PARTITION COEFFICIENTS IN ENVIRONMENTAL CHEMISTRY, CHEMICAL CARCINOGENS, AND MODELLING OF TOXIC SPILLS INTO WATERWAYS.

AVAILABILITY: ACADEMIC PRESS, INC., 111 FIFTH AVENUE, NEW YORK, NY 10003

IRIS ACCESSION NUMBER: EW008073

PUBLICATION DATE: 81

TITLE: CHEMICAL TECHNICIANS' READY REFERENCE HANDBOOK, 2ND EDITION.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMISTRY; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *LABORATORY SAFETY; *POST SECONDARY EDUCATION; *SAFETY

DESCRIPTIVE NOTE: 867P. PRICE: $43.90

ABSTRACT: THIS HANDBOOK WAS DESIGNED TO PROVIDE EVERY SINGLE STEP TO BE FOLLOWED WHEN PERFORMING NORMAL LABORATORY PROCEDURES. PROCEDURES ARE WRITTEN IN SIMPLE SENTENCES FOR MANY LABORATORY FUNCTIONS. EMPHASIS IS ON SAFETY IN THE LABORATORY.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008074

PUBLICATION DATE: 82

TITLE: SAFETY AND ACCIDENT PREVENTION IN CHEMICAL OPERATIONS, 2ND EDITION.

PERSONAL AUTHOR: FAWCETT, HOWARD H.; WOOD, WILLIAM S.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMICALS; *GUIDES; HAZARDOUS MATERIALS; *INDUSTRIAL SAFETY; *INSTRUCTIONAL MATERIALS; *SAFETY; *SAFETY EDUCATION; TRAINING PROGRAMS; *WORK ENVIRONMENT

DESCRIPTIVE NOTE: 880P. PRICE: $74.00

ABSTRACT: THIS BOOK PROVIDES A COMPREHENSIVE GUIDE TO PERSONAL SAFETY AND INDUSTRIAL HEALTH. TOPICS INCLUDE: CHEMICAL HAZARDS AND WORKER SAFETY, HAZARDS OF COMMERCIAL CHEMICAL OPERATIONS, SAFETY EDUCATION AND TRAINING, FLAMMABLE MATERIALS, RADIATION, RESPIRATORY HAZARDS, FIRE EXTINGUISHING AGENTS, AND PERSONAL PROTECTIVE EQUIPMENT.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008075

PUBLICATION DATE: 81

TITLE: CHEMICAL HAZARDS IN THE WORKPLACE-MEASUREMENT AND CONTROL.

PERSONAL AUTHOR: CHOUDHARY, G.

DESCRIPTOR: *ACCIDENT PREVENTION; *CHEMICALS; HAZARDOUS MATERIALS; *INDUSTRIAL SAFETY; *INSTRUCTIONAL MATERIALS; *MEASUREMENT; *MONITORING; *POST SECONDARY EDUCATION; SAFETY; SAMPLING; *STATE-OF-THE-ART REVIEWS; TOXIC SUBSTANCES; *WORK ENVIRONMENT

DESCRIPTIVE NOTE: 628P. PRICE: $49.50

ABSTRACT: THIS BOOK PRESENTS A STATE-OF-THE-ART AND FUTURE DIRECTIONS OF MONITORING AND MEASUREMENT PROCEDURES FOR THE OCCUPATIONAL ENVIRONMENT. THIRTY-EIGHT CHAPTERS ARE GROUPED INTO FIVE SUBJECT AREAS: METHODOLOGY, MONITORING AND CONTROL, SPECIAL TOXICANTS, QUALITY ASSURANCE, AND NEW TECHNOLOGIES.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008076

PUBLICATION DATE: 82

TITLE: FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE HANDBOOK.

DESCRIPTOR: *ACCIDENT PREVENTION; *COMBUSTIBLE MATERIALS; EQUIPMENT; *FLAMMABLE MATERIALS; *GUIDELINES; *HANDBOOKS; PIPES; *SAFETY; *STORAGE; TANKS; VALVES

DESCRIPTIVE NOTE: 246P. PRICE: $24.25

ABSTRACT: THIS HANDBOOK OUTLINES RECOMMENDED PROCEDURES AND SPECIFICATIONS FOR THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS. TOPICS INCLUDE: TANK STORAGE, PIPES, VALVES AND FITTINGS, CONTAINER AND PORTABLE TANK STORAGE, AND INDUSTRIAL AND BULK PLANTS. FIVE APPENDICES ON RELATED SUBJECTS ARE INCLUDED FOR GREATER CLARIFICATION ON THE TOPIC FLAMMABLE AND COMBUSTIBLE LIQUIDS.

AVAILABILITY: LAB SAFETY SUPPLY, P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008077

PUBLICATION DATE: MAR 82

TITLE: INCREASING ARCAT (TRADE NAME) TEST SENSITIVITY FOR EXAMINATION OF POTABLE WATERS.

PERSONAL AUTHOR: ISBISTER, JENEFIR D.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ARCAT; *COLIPHAGES; FILTERS; *LABORATORY PROCEDURES; *PERFORMANCE EVALUATION; *POTABLE WATER; *RESEARCH REPORTS; *SAMPLING; *TESTING; *WATER QUALITY

DESCRIPTIVE NOTE: 101P. PRICE CODE: PC A06/MF A01; PB82-196163

ABSTRACT: THE PRIMARY OBJECTIVE OF THIS RESEARCH PROJECT WAS TO INCREASE THE SENSITIVITY OF THE ARCAT METHOD TO DETECT ONE COLIPHAGE PER 100 ML OF WATER SAMPLE. SEVERAL CONCENTRATION TECHNIQUES WERE EVALUATED AND THREE METHODS SELECTED FOR IN-DEPTH STUDY. TWO OF THE METHODS SELECTED FOR IN-DEPTH STUDY WERE FILTER CONCENTRATION TECHNIQUES. THE THIRD METHOD INVOLVED AMPLIFICATION OF COLIPHAGES BY ADDITION OF NUTRIENTS AND A HOST CULTURE FOLLOWED BY INCUBATION TO ALLOW A LYTIC BURST CYCLE TO OCCUR. OF THESE TECHNIQUES, THE ZETA PLUS 60S FILTRATION TECHNIQUE PROVED TO BE THE OPTIMUM METHOD. COLIPHAGE ADSOORPTION WITH THIS FILTER RANGED FROM 80-100%. COLIPHAGE RECOVERIES FROM THE FILTERS WERE > OR = 90%. WITH THIS CONCENTRATION METHOD, TEST RESULTS CAN BE OBTAINED WITHIN 6 1/2 HOURS WITH A SENSITIVITY OF 1 COLIPHAGE PER 100 ML.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008078

PUBLICATION DATE: APR 82

TITLE: PERSISTENCE IN MODEL ECOSYSTEMS.

PERSONAL AUTHOR: GARD, THOMAS C.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ECOLOGY; *ECOSYSTEMS; *MATHEMATICAL MODELS; *MODELING; *RESEARCH REPORTS; *SYSTEMS ANALYSIS; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 17P. PRICE CODE: PC A02/MF A01; PB82-196916

ABSTRACT: MATHEMATICAL MODELS AID IN UNDERSTANDING ENVIRONMENTAL SYSTEMS AND IN DEVELOPING TESTABLE HYPOTHESES RELEVANT TO THE FATE AND ECOLOGICAL EFFECTS OF TOXIC SUBSTANCES IN SUCH SYSTEMS. WITHIN THE FRAMEWORK OF MICROCOSM OR LABORATORY ECOSYSTEM MODELING, SOME DIFFERENTIAL EQUATION MODELS, IN PARTICULAR, BECOME TRACTABLE TO MATHEMATICAL ANALYSIS WHEN THE FOCUS IS ON THE PROBLEM OF PERSISTENCE. IN THIS REPORT, A HIERARCHY OF MICROCOSM-RELATED MODELS, THE TOP LEVEL OF WHICH CONTAINS A NUTRIENT-PRODUCER-GRAZER FOOD CHAIN, AND GENERAL FOOD CHAINS ARE ANALYZED FOR PERSISTENCE. THE RESULTS, WHICH TAKE THE FORM OF INEQUALITIES INVOLVING MODEL PARAMETERS, SPECIFY NECESSARY CONDITIONS. THESE RESULTS CAN SERVE AS A BASIS FOR PRELIMINARY EVALUATIONS OF MODEL PERFORMANCE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008079

PUBLICATION DATE: APR 82

TITLE: THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM PART II - USER'S GUIDE.

PERSONAL AUTHOR: KOPKE, JONATHAN E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; COMPUTER PROGRAMS; *CONTINUOUS FLOW ANALYZER SYSTEM; *DATA COLLECTION; *ENVIRONMENTAL PROTECTION AGENCY; *FLOW ANALYSIS; *FLOW MEASUREMENT; *GUIDES; *LABORATORY PROCEDURES; *MONITORING; *PROGRAM DESCRIPTIONS; *SAMPLING; *WATER QUALITY

DESCRIPTIVE NOTE: 54P. PRICE CODE: PC A04/MF A01; PB82-199951

ABSTRACT: THIS PUBLICATION CONTAINS THE USER'S GUIDE TO THE EPA CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM. THIS SYSTEM CAN RECEIVE LISTS OF SAMPLES FROM THE SAMPLE FILE CONTROL (SFC) SYSTEM AND RETURN THE MEASURED CONCENTRATIONS TO THAT SYSTEM OR THE AUTOMATION SYSTEM CAN OPERATE INDEPENDENTLY OF SFC AND ONLY OUTPUT THE FINAL RESULTS TO A HARDCOPY UNIT. IT IS CAPABLE OF INTERFACING WITH THREE CONTINUOUS FLOW ANALYZER DETECTORS SIMULTANEOUSLY. IT INCORPORATES THE FOLLOWING MAJOR FEATURES: (1) BASELINE INTERPOLATION BETWEEN BLANKS, (2) MULTIPOINT CALIBRATION USING FIRST, SECOND, OR THIRD DEGREE REGRESSION OR LINEAR INTERPOLATION, (3) TIMELY QUALITY CONTROL ASSESSMENTS FOR SPIKED SAMPLES, DUPLICATES, LABORATORY CONTROL STANDARDS, REAGENT BLANKS, AND INSTRUMENT CHECK STANDARDS, (4) REAGENT BLANK SUBTRACTION, AND (5) PLOTTING OF CALIBRATION CURVES AND RAW DATA PEAKS. THIS DOCUMENT CONTAINS DETAILED DESCRIPTIONS AND EXAMPLES OF THE FEATURES OF THE SYSTEM, AS THEY APPEAR TO THE USER. TWO RELATED PUBLICATIONS ARE TITLED, 'THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM, PART I -- FUNCTIONAL SPECIFICATIONS,' AND 'THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM, PART III -- PROGRAM DOCUMENTATION.'.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008080

PUBLICATION DATE: APR 82

TITLE: THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM.

PART III - PROGRAM DOCUMENTATION.

PERSONAL AUTHOR: KOPKE, JONATHAN E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CONTINUOUS FLOW ANALYZER SYSTEM; COMPUTER PROGRAMS; *DATA COLLECTION; *ENVIRONMENTAL PROTECTION AGENCY; *FLOW ANALYSIS; *FLOW MEASUREMENT; *LABORATORY PROCEDURES; *MONITORING; *PROGRAM DESCRIPTION; *SAMPLING; *WATER QUALITY

DESCRIPTIVE NOTE: 227P. PRICE CODE: PC A11/MF A01; PB82-199969

ABSTRACT: THIS REPORT CONTAINS COMPLETE DOCUMENTATION FOR THE 21 PROGRAMS AND EIGHT DATA FILES OF THE EPA CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM. THIS SYSTEM CAN RECEIVE LISTS OF SAMPLES FROM THE SAMPLE FILE CONTROL SYSTEM AND RETURN THE MEASURED CONCENTRATIONS TO THAT SYSTEM. IT IS CAPABLE OF INTERFACING WITH THREE CONTINUOUS FLOW ANALYZER DETECTORS SIMULTANEOUSLY. IT INCORPORATES THE FOLLOWING MAJOR FEATURES: (1) BASELINE INTERPOLATION BETWEEN BLANKS (2) MULTI-POINT CALIBRATION USING FIRST, SECOND, OR THIRD DEGREE REGRESSION OR LINEAR INTERPOLATION, (3) TIMELY QUALITY CONTROL ASSESSMENTS FOR SPIKED SAMPLES, DUPLICATES, LABORATORY CONTROL STANDARDS, REAGENT BLANKS, AND INSTRUMENT CHECK STANDARDS, (4) REAGENT BLANK SUBTRACTION, AND (5) PLOTTING OF CALIBRATION CURVES AND RAW DATA PEAKS. IN THIS DOCUMENT, THERE IS A FUNCTIONAL DESCRIPTION, A SYMBOL DEFINITIONS TABLE, A FUNCTIONAL FLOWCHART, A PROGRAM LISTING, AND A SYMBOL CROSS REFERENCE TABLE FOR EACH PROGRAM. THE STRUCTURE OF EVERY DATA FILE IS ALSO DETAILED. TWO RELATED PUBLICATIONS ARE TITLED, 'THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM PART I - FUNCTIONAL SPECIFICATIONS,' AND 'THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM, PART II - USER'S GUIDE.'.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008081

PUBLICATION DATE: APR 82

TITLE: OIL SPILLS AND OIL POLLUTION IN THE ARCTIC AND ANTARCTIC. 1970-APRIL, 1982 (CITATIONS FROM POLLUTION ABSTRACTS.)

DESCRIPTOR: *ANTARCTIC; *ARCTIC; *BIBLIOGRAPHIES; BIOLOGY; *CASE STUDIES; *ENVIRONMENT; *OIL SPILLS; *POLLUTION CONTROL; *WATER POLLUTION

DESCRIPTIVE NOTE: 58P. PRICE CODE: PC N01/MF N01; PB82-864711

ABSTRACT: THIS BIBLIOGRAPHY COVERS THE ENVIRONMENTAL AND BIOLOGICAL CONSEQUENCES OF OIL SPILLS AND OIL POLLUTION IN THE ARCTIC REGIONS. TOPICS INCLUDE PREVENTION, DETECTION, BEHAVIOR, CONTROL, AND RECOVERY OF ARCTIC OIL SPILLS AND POLLUTION. SOME ATTENTION IS GIVEN TO EFFECTS UPON PARTICULAR BIOLOGICAL SPECIES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 58 CITATIONS, 18 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008082

PUBLICATION DATE: APR 82

TITLE: WATER QUALITY ACTS: STANDARDS, REGULATIONS, AND REACTIONS. 1970-APRIL, 1982 (CITATIONS FROM POLLUTION ABSTRACTS.)

DESCRIPTOR: *BIBLIOGRAPHIES; ECONOMICS; ENFORCEMENT; *ENVIRONMENTAL LEGISLATION; *LEGISLATION; *LAWS; *POLLUTION CONTROL; POLITICS; *PUBLIC OPINION; *REGULATIONS; *STANDARDS; TECHNOLOGY; *WATER QUALITY

DESCRIPTIVE NOTE: 206P. PRICE CODE: PC N01/MF N01; PB82-864711

ABSTRACT: CITATIONS IN THIS BIBLIOGRAPHY COVER STANDARDS, REGULATIONS, AND PUBLIC AND SPECIAL INTEREST REACTIONS TO VARIOUS WATER QUALITY ACTS OR LAWS. TECHNICAL, ENVIRONMENTAL, ECONOMIC, AND POLITICAL ASPECTS OF THESE LAWS ARE CONSIDERED. ATTENTION IS ALSO GIVEN TO METHODS AND PROBLEMS OF IMPLEMENTATION AND ENFORCEMENT. (THIS UPDATED BIBLIOGRAPHY CONTAINS 254 CITATIONS, 29 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008083

PUBLICATION DATE: MAR 82

TITLE: MODEL PROTOCOL FOR THE SPACE COMPREHENSIVE EVALUATION OF PUBLICLY OWNED TREATMENT WORKS PERFORMANCE AND OPERATION.

PERSONAL AUTHOR: ROBERTS, HUGH D.; AND OTHERS

DESCRIPTOR: ADMINISTRATION; DESIGN; *FACILITIES; *GUIDELINES; *INSTRUCTIONAL MATERIALS; MAINTENANCE; MANAGEMENT; *MANUALS; MONITORING; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 123P. PRICE CODE: PC A06/MF A01; PB82-180480

ABSTRACT: THIS MANUAL PRESENTS A SYSTEMATIC APPROACH TO CONDUCTING COMPREHENSIVE PERFORMANCE EVALUATION OF MUNICIPAL WASTEWATER TREATMENT PLANTS. THE OBJECTIVE OF THE EVALUATION IS TO IDENTIFY AND RANK THE CAUSES OF POOR PLANT PERFORMANCE. FIVE MAJOR PROBLEM AREAS ARE ADDRESSED. THEY ARE DESIGN, PERFORMANCE MONITORING, OPERATION, MAINTENANCE, AND ADMINISTRATION. BY FOLLOWING THIS PROTOCOL AN EVALUATION TEAM WILL BE ABLE TO IDENTIFY DEFICIENCIES IN EACH OF THE FIVE CATEGORIES, WEIGHT THEM WITH RESPECT TO ADVERSE IMPACT ON PLANT PERFORMANCE, AND RANK THEM IN ORDER OF SEVERITY OF

IMPACT. THE MANUAL ALSO ADDRESSES THE PREPARATORY STEPS TO BE COMPLETED BEFORE THE ACTUAL PLANT VISIT AND INCLUDES A SECTION COVERING THE PREPARATION OF THE EVALUATION REPORT. ALL REQUIRED DATA AND WORK SHEETS ARE INCLUDED IN THE APPENDIXES OF THE MANUAL. THE EVALUATION PROTOCOL HAS BEEN PREPARED AS A USER ORIENTED FIELD DOCUMENT THAT PROVIDES SPECIFIC GUIDANCE FOR CONDUCTING COMPREHENSIVE PLANT EVALUATIONS AND IDENTIFYING PROBLEMS AND SOLUTIONS IN ORDER TO IMPROVE PLANT PERFORMANCE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008084

PUBLICATION DATE: FEB 82

TITLE: PRETREATMENT RESOURCE READER: A COMPENDIUM OF EXPERIENCE AND PRACTICAL KNOWLEDGE FOR THE ESTABLISHMENT OF LOCAL PROGRAMS.

DESCRIPTOR: *ECONOMICS; *EFFLUENTS; *GUIDES; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *POLLUTION CONTROL; PRETREATMENT; RESEARCH REPORTS; STANDARDS; TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 227P. PRICE CODE: PC A13/MF A01; PB82-181629

ABSTRACT: PRETREATMENT PROGRAMS ARE DESIGNED TO CONTROL THE INTRODUCTION AND QUALITY OF INDUSTRIAL WASTEWATER. THE PRETREATMENT READER IS AN EDITED COMPENDIUM OF USEFUL DISCUSSION PAPERS WRITTEN BY AND FOR THE TECHNICAL AND MANAGEMENT STAFFS OF PUBLICLY OWNED WATER POLLUTION CONTROL AUTHORITIES. THE RESOURCE READER IS CONCERNED WITH THE ORGANIZATIONAL, FINANCIAL, LEGAL, AND TECHNICAL ASPECTS OF LOCALLY ESTABLISHED PRETREATMENT PROGRAMS. CHAPTERS ARE DEVOTED TO EXPERIENCES IN CONDUCTING EFFECTIVE INDUSTRIAL WASTE SURVEYS, SECURING LEGAL AUTHORITIES, SETTING LOCAL EFFLUENT STANDARDS, DESIGN OF MONITORING SYSTEMS, SLUDGE DISPOSAL ASPECTS, AND OTHER TOPICS. THE RESOURCE READER IS THE OUTGROWTH OF A TWO YEAR EFFORT CONDUCTED BY THE ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES AND SUPPORTED BY A GRANT FROM THE U.S. ENVIRONMENTAL PROTECTION AGENCY. REGIONAL SEMINARS AND A NATIONAL SYMPOSIUM WERE HELD TO ENABLE LOCAL AGENCIES TO BETTER UNDERSTAND THE IMPORTANCE OF PRETREATMENT AND THE DIFFICULTIES ASSOCIATED WITH IT. IT SHOULD BE A VALUABLE TOOL FOR AGENCIES IN THE PROCESS OF EITHER DEVELOPING OR IMPLEMENTING A LOCAL PRETREATMENT PROGRAM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008085

PUBLICATION DATE: FEB 82

TITLE: ELECTRICAL ENERGY CONSUMPTION AND HEATING REQUIREMENTS OF MUNICIPAL WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: WANG, MU HAO; WANG, LAWRENCE K.

DESCRIPTOR: *ELECTRICITY; *ENERGY CONSUMPTION; *FACILITIES; *HEATING; *MATHEMATICAL MODELS; MODELING; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; UNIT PROCESSES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 35P. PRICE CODE: PC A03/MF A01; PB82-183393

ABSTRACT: ELECTRICAL ENERGY CONSUMPTION MODELS ARE DEVELOPED FOR THE UNIT OPERATIONS/PROCESSES OF PUMPING, SCREENING AND COMMINUTION, GRIT REMOVAL, SEDIMENTATION, CHLORINATION, GRAVITY THICKENING, ANAEROBIC DIGESTION, VACUUM FILTRATION, INCINERATION, AND DIFFUSED AIR FLOTATION. THE MATHEMATICAL MODELS OF TOTAL HEATING REQUIREMENTS OF BIOLOGICAL WASTEWATER TREATMENT PLANTS ARE ALSO DERIVED AND PRESENTED. PRACTICAL EXAMPLES ARE INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008086

PUBLICATION DATE: MAR 82

TITLE: POLLUTION AND ITS CONTROL IN THE PAPER AND PULP INDUSTRY. 1976-FEBRUARY 1982. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; COSTS; ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *PAPER INDUSTRY; *POLLUTION CONTROL; *PULP INDUSTRY; *RESEARCH REPORTS; SOCIOECONOMIC ASPECTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 223P. PRICE CODE: PC N31/MF N01; PB82-806514

ABSTRACT: THE CITED REPORTS OF FEDERALLY-FUNDED RESEARCH COVER VARIOUS ASPECTS OF POLLUTION AND POLLUTION CONTROL IN THE PAPER AND PULP INDUSTRY. TOPICS INCLUDE CONTROL TECHNIQUES, TYPES OF WASTES, CONTROL COSTS, POLLUTION EFFECTS ON THE ENVIRONMENT, AND THE SOCIOECONOMIC FACTORS OF POLLUTION AND POLLUTION CONTROL. (THIS UPDATED BIBLIOGRAPHY CONTAINS 216 CITATIONS, 25 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008087

PUBLICATION DATE: MAR 82

TITLE: WASTEWATER TREATMENT USING FLOCCULATION, COAGULATION, AND FLOTATION. 1968-MAY,81 (CITATIONS FROM THE AMER. PET. INST. DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; CHEMICAL INDUSTRY; *COAGULATION; ENGINEERING; *FLOCCULATION; *FLOTATION;

*INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); PETROLEUM INDUSTRY; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 198P. PRICE CODE: PC N01/MF N01; PB82-806530

ABSTRACT: THE BIBLIOGRAPHY CITES WORLDWIDE RESEARCH ON TREATING INDUSTRIAL WASTE WATERS TO REMOVE POLLUTANTS, WITH EMPHASIS ON THE PETROLEUM AND CHEMICAL INDUSTRIES. THE METHODS USED ARE FLOCCULATION, COAGULATION, OR FLOTATION. THEORY, BASIC RESEARCH, ENGINEERING, AND FULL-SCALE OPERATIONS ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 192 CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008088

PUBLICATION DATE: FEB 82

TITLE: BIOLOGICAL WATER ANALYSIS. 1978-FEBRUARY, 1982. (CITATIONS FROM THE INFORMATION RETRIEVAL, LTD. DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *BIBLIOGRAPHIES; BIOLOGY; *DETECTION; *HEAVY METALS; *LABORATORY PROCEDURES; *PARASITES; *PARTICULATES; *RESEARCH REPORTS; *VIRUSES; *WATER QUALITY

DESCRIPTIVE NOTE: 88P. PRICE CODE: PC N01/MF N01; PB82-863093

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE ANALYSIS OF WATER FOR BACTERIAL, VIRAL AND PARASITIC CONTENT, SUSPENDED PARTICULATE MATTER, HEAVY METALS AND OTHER POLLUTANTS. METHODS FOR THE BIOLOGICAL ANALYSIS OF WATER ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 63 CITATIONS, 10 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008089

TITLE: A PROCEDURE FOR EVALUATING SUBPOTABLE WATER REUSE POTENTIAL AT ARMY FIXED FACILITIES.

PERSONAL AUTHOR: BANDY, J. T.; AND OTHERS

DESCRIPTOR: *COST EFFECTIVENESS; *EVALUATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *U.S. ARMY; *WASTEWATER REUSE; *WASTEWATER TREATMENT

ABSTRACT: THE AMENDMENTS TO THE CLEAN WATER ACT OF 1977 REQUIRE ARMY INSTALLATIONS TO CONSIDER WASTEWATER REUSE WHEN PLANNING NEW WATER OR WASTEWATER TREATMENT WORKS. THIS HAS CREATED A NEED FOR A METHOD THAT CAN BE USED (1) TO ASSESS QUICKLY THE OPPORTUNITIES FOR REUSE AT ARMY FIXED FACILITIES, AND (2) TO IDENTIFY THE MOST COST-EFFECTIVE REUSE OPTION AVAILABLE. TO ADDRESS THIS NEED, U.S. ARMY CONSTRUCTION ENGINEERING RESEARCH LABORATORY (CERL) RESEARCHERS HAVE DEVELOPED THE WASTEWATER REUSE COMPONENT OF THE POLLUTION ABATEMENT MANAGEMENT SYSTEMS (PAMS). THIS WILL HELP THE ARMY FACILITIES ENGINEERS, MAJOR COMMANDS, AND ENVIRONMENTAL OFFICES MEET FEDERAL ENVIRONMENTAL REQUIREMENTS BY ALLOWING A QUICK, ACCURATE ASSESSMENT OF REUSE POTENTIAL, AND PROVIDING A BASIS FOR ECONOMIC COMPARISON OF REUSE SYSTEMS.

AVAILABILITY: NOV 81 107 PRICE CODE: PC A06/MF A01; AD-A111 191/3

IRIS ACCESSION NUMBER: EW008090

PUBLICATION DATE: 81

TITLE: USE OF THE OCEAN FOR MAN'S WASTES. PROCEEDINGS OF SYMPOSIUM HELD AT LEWES, DELAWARE ON 23-24 JUNE 1981.

DESCRIPTOR: CONFERENCE PROCEEDINGS; ENGINEERING; *MARINE ENVIRONMENT; *OCEANS; *OCEANOGRAPHY; TECHNOLOGY; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WASTE MANAGEMENT

DESCRIPTIVE NOTE: 311P. PRICE CODE: PC A14/MF A01; AD-A111 358/8

ABSTRACT: THE SEA IS POTENTIALLY AN IMPORTANT RECEIVER OF WATERS. THE MARINE BOARD, ASSEMBLY OF ENGINEERING, NATIONAL RESEARCH COUNCIL, CONVENED A SYMPOSIUM TO EXPLORE THE CAPACITY OF THE OCEANS TO ASSIMILATE WASTES AND THE PROCESSES BY WHICH THAT CAPACITY CAN BE UTILIZED. THE SYMPOSIUM WAS HELD IN LEWES, DELAWARE IN JUNE, 1981. THE SPEAKERS AT THE SYMPOSIUM DEFINED THE MAJOR TECHNICAL PROBLEMS AND ENGINEERING CONCERNS INVOLVED IN USING THE OCEANS TO ACCEPT AND ASSIMILATE WASTE. SPEAKERS AND PANEL PARTICIPANTS RECOGNIZED THAT THERE ARE MANY WASTES--SUCH AS BIODEGRADEABLE ORGANIC MATTER, AND UNDER CERTAIN CIRCUMSTANCES, INDUSTRIAL WASTES--THAT CAN BE ASSIMILATED BY THE OCEAN. MOREOVER, THEY FREQUENTLY EXPRESSED THE VIEW THAT THE OCEAN OPTION SHOULD BE CONSIDERED WITH LAND AND AIR DISPOSAL IN WASTE MANAGEMENT ASSESSMENTS. THE CAPABILITY OF THE OCEAN IS UNDERUSED, IN THE VIEW OF THE PRESENTERS, MANY OF WHOM ALSO EMPHASIZED THAT THE OCEAN ASSIMILATIVE CAPACITY CAN BE EXCEEDED AND MUST BE EVALUATED ON A SITE-SPECIFIC BASIS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008091

PUBLICATION DATE: MAR 81

TITLE: FUNDAMENTAL STUDY ON THE OZONE POSTTREATMENT OF REVERSE OSMOSIS PERMEATES FROM ARMY WASTEWATERS.

PERSONAL AUTHOR: CHIAN, EDWARD S. K.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DESINFECTION; *ORGANIC COMPOUNDS; *OZONATION; OZONE; *OPERATIONS (WASTEWATER); *POSTTREATMENT; *RESEARCH REPORTS; *REVERSE OSMOSIS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 322P. PRICE CODE: PC A14/MF A01; AD-A111 391/9

ABSTRACT: THE OZONATION PROCESS IS DEMONSTRATED TO BE AN EFFECTIVE MEANS TO REMOVE TRACE AMOUNTS OF ORGANICS THAT PASS THROUGH THE REVERSE OSMOSIS (RO) PROCESS. THE KINETICS AND THE MECHANISM OF THE OZONATION PROCESS HAVE BEEN STUDIED TO IMPROVE REMOVAL OF THESE COMPOUNDS FROM RO PERMEATES. AN EXTENSIVE EFFORT WAS MADE TO DEVELOP METHODOLOGIES FOR THE ANALYSIS OF TRACE ORGANICS IN RO PERMEATES AS WELL AS FOR THE INTERMEDIATES FORMED DURING OZONATION OF RO PERMEATE. THIS INVOLVED THE USE OF DISTILLATION, HEAD SPACE, AND PURGE AND TRAP METHODS FOR THE CONCENTRATION OF VOLATILE ORGANIC CONSTITUENTS AND OF VOLATILE ORGANIC CONSTITUENTS AND OF THE SOLVENT EXTRACTION METHOD FOR THE CONCENTRATION OF INTERMEDIATELY VOLATILE (I.E., GC VOLATILE) AND NONVOLATILE ORGANICS. GAS CHROMATOGRAPHY (GC) WAS USED TO DETERMINE THE VOLATILE AND INTERMEDIATELY VOLATILE COMPOUNDS, WHEREAS HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC) WAS USED FOR THE NONVOLATILE COMPOUNDS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008092

PUBLICATION DATE: MAR 82

TITLE: INFORMATION ON CORPS OF ENGINEERS DEAUTHORIZATION PROGRAM FOR WATER PROJECTS.

DESCRIPTOR: *ARMY CORPS OF ENGINEERS; *DEAUTHORIZATION PROGRAM; *FEDERAL PROGRAMS; *PROGRAM DESCRIPTIONS; *WATER PROJECTS; *WATER RESOURCES

DESCRIPTIVE NOTE: 29P. PRICE CODE: PC A03/MF A01; PB82-188798

ABSTRACT: THE 1974 WATER RESOURCES DEVELOPMENT ACT (PUBLIC LAW 93251) REQUIRES THE SECRETARY OF THE ARMY TO SUBMIT ANNUALLY TO THE CONGRESS A LIST OF AUTHORIZED BUT UNNEEDED WATER RESOURCES PROJECTS RECOMMENDED FOR DEAUTHORIZATION. THE RECOMMENDED PROJECTS MUST NOT HAVE RECEIVED ANY APPROPRIATIONS DURING THE LAST 8 YEARS. SINCE 1974, 453 OF THE 877 ELIGIBLE PROJECTS WERE DEAUTHORIZED AS A RESULT OF CORPS OF ENGINEERS REVIEWS. THE OBJECTIVE OF THE REPORT WAS TO OBTAIN SPECIFIC INFORMATION ON THE U.S. ARMY CORPS OF ENGINEERS DEAUTHORIZATION PROGRAM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008093

PUBLICATION DATE: SEP 81

TITLE: EARTHQUAKE DESIGN CRITERIA FOR WATER SUPPLY AND WASTEWATER SYSTEMS.

DESCRIPTOR: *ACCIDENT PREVENTION; *DESIGN; *EARTHQUAKES; *FACILITIES; GUIDELINES; *PLANNING; PIPES; *SEISMIC ACTIVITY; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *WATER TREATMENT; *WATER SUPPLY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 488P. PRICE CODE: PC A21/MF A01; PB82-82-189291

ABSTRACT: SEISMIC PHENOMENA ARE DESCRIBED AND A PROCEDURE IS GIVEN TO ENSURE THAT WATER AND SEWAGE SYSTEMS ARE FUNCTIONING PROPERLY IN THE AFTERMATH OF AN EARTHQUAKE. LARGE DISPLACEMENTS, GROUND FAILURE, AND SEISMIC SHAKING OF PIPES ARE SHOWN TO BE THE THREE MAJOR CAUSES OF PIPELINE DAMAGE. THE EFFECTS OF DIFFERENT SOIL MEDIA IN RELATION TO SEISMIC SHAKING AND DAMAGE OF PIPELINE FAILURES ARE EXAMINED. POTENTIAL DAMAGE TO WATER AND SEWAGE TREATMENT FACILITIES IS EXPLORED AND BASIC FAILURE MODES ARE VIEWED IN RELATION TO TREATMENT PLANT FACILITIES. THE NEED FOR SITE PLANNING AND DESIGN STRATEGIES TO DECREASE THE SEISMIC VULNERABILITY OF WATER AND WASTEWATER SYSTEMS IS EMPHASIZED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008094

PUBLICATION DATE: MAR 82

TITLE: A REVIEW OF AQUATIC HABITAT ASSESSMENT METHODS.

PERSONAL AUTHOR: SCHUYTEMA, GERALD S.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *ASSESSMENT; *ENVIRONMENTAL IMPACTS; *EVALUATION; *HABITATS; *NONPOINT POLLUTION; *POLLUTION CONTROL; *WATERSHEDS

DESCRIPTIVE NOTE: 41P. PRICE CODE: PC A03/MF A01; PB82-189648

ABSTRACT: APPROXIMATELY 30 AQUATIC HABITAT ASSESSMENT TECHNIQUES WERE SUMMARIZED AND COMPARED TO PROVIDE INFORMATION TO WATERSHED AND NONPOINT POLLUTION CONTROL MANAGERS. MOST METHODS HAVE BEEN DEVELOPED BY FEDERAL OR STATE AGENCIES AND HAVE HAD GREATEST APPLICATION IN THE WESTERN UNITED STATES. THEY ARE CLASSIFIED ACCORDING TO A NUMBER OF MUTUALLY INTERACTING CATEGORIES SUCH AS IMPACT ASSESSMENT, INVENTORY AND GENERAL DESCRIPTION, SALMONID OR NON-SALMONID STREAMS, PARTICULAR FISH SPECIES ORIENTATION, CHANNEL STABILITY, TRANSECT, AND BIOTIC INDICES. MANY OF THE METHODS HAVE DEVELOPED INDICES OR NUMERICAL VALUES WHICH CAN BE USED FOR COMPARISONS OR EVALUATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008095

PUBLICATION DATE: APR 82

TITLE: THE CONTINUOUS FLOW ANALYZER AUTOMATION SYSTEM. PART I - FUNCTIONAL SPECIFICATIONS.

PERSONAL AUTHOR: KOPKE, JONATHAN E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COMPUTER APPLICATIONS; *CONTINUOUS FLOW ANALYZERS; *DATA ACQUISITION; *DESIGN; EQUIPMENT; *FLOW ANALYSIS; *FLOW ANALYZERS; *MEASUREMENT; *SAMPLING; *TECHNOLOGICAL ADVANCEMENTS

DESCRIPTIVE NOTE: 49P. PRICE CODE: PC A03/MF A01; PB82-191081

ABSTRACT: THIS DOCUMENT CONTAINS THE PROJECT DEFINITION, THE FUNCTIONAL REQUIREMENTS, AND THE FUNCTIONAL DESIGN FOR A PROPOSED COMPUTER AUTOMATION SYSTEM FOR THE CONTINUOUS FLOW ANALYZER. THE PROPOSED SYSTEM WILL ACCOMPLISH REAL-TIME DATA ACQUISITION, CALIBRATION, BASELINE CORRECTION, CALCULATION OF CONCENTRATIONS, DILUTION AND REMEASUREMENT OF OFFSCALE SAMPLES, ON-LINE QUALITY CONTROL CHECKS, REAGENT BLANK SUBTRACTION, PLOTTING OF CALIBRATION CURVES AND RAW DATA, AND BIDIRECTIONAL COMMUNICATION WITH THE SAMPLE FILE CONTROL SYSTEM. THIS PROPOSED AUTOMATION SYSTEM WILL FACILITATE ROUTINE MEASUREMENT OF LARGE NUMBERS OF SAMPLES, WHILE PROVIDING THE FLEXIBILITY NEEDED FOR A RESEARCH ENVIRONMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008096

PUBLICATION DATE: JAN 82

TITLE: EVALUATION AND CONTROL OF SIDESTREAMS GENERATED IN PUBLICLY OWNED TREATMENT WORKS.

PERSONAL AUTHOR: BALL, ROY O.; AND OTHERS

DESCRIPTOR: *FACILITIES; *MATHEMATICAL MODELS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SIDESTREAMS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 223P. PRICE CODE: PC A10/MF A01; PB82-195272

ABSTRACT: THIS DOCUMENT PROVIDES METHODOLOGIES AND CONSIDERATIONS FOR THE EVALUATION AND CONTROL OF SIDESTREAMS GENERATED IN PUBLICLY OWNED TREATMENT WORKS (POTW'S). THE METHODOLOGIES ARE STRUCTURED IN ALGORITHMS THAT PROVIDE GUIDANCE FOR THE DETERMINATION AND CONTROL OF THE SIDESTREAM IMPACTS. THE ALGORITHMS ARE USED INITIALLY TO DETERMINE WHETHER ONE OR MORE SIDESTREAMS ARE AFFECTING THE PRIMARY AND SECONDARY MAINSTREAM PROCESS PERFORMANCE. ONCE AN IMPACT OF THE PROCESS PERFORMANCE IS DETERMINED, ADDITIONAL ALGORITHMS ARE PROVIDED THAT PRESENT OPERATIONAL MEANS OF CONTROLLING THE IMPACT OF THE SIDESTREARM, EITHER AT THE MAINSTREAM PROCESS OR AT THE SOURCE OF THE SIDESTREAM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008097

PUBLICATION DATE: APR 82

TITLE: DETERMINATION OF BENZIDINES IN INDUSTRIAL AND MUNICIPAL WASTEWATERS.

PERSONAL AUTHOR: RIGGIN, RALPH M.; HOWARD, C. C.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BENZIDINE; CHROMATOGRAPHY; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; MUNICIPAL WASTES; *RESEARCH REPORTS; *WASTEWATER; WATER QUALITY

DESCRIPTIVE NOTE: 88P. PRICE CODE: PC A05/MF A01; PB82-196320

ABSTRACT: A METHOD FOR THE DETERMINATION OF BENZIDINE AND 3,3-DICHLOROBENZIDINE IN WASTEWATER WAS DEVELOPED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008098

PUBLICATION DATE: MAR 82
TITLE: DETERMINATION OF TCDD IN INDUSTRIAL AND MUNCIPAL WASTEWATERS.

PERSONAL AUTHOR: WONG, ANTHONY S.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHROMATOGRAPHY; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; MUNICIPAL WASTES; *RESEARCH REPORTS; *TCDD; *WASTEWATER; *WATER ANALYSIS; WATER QUALITY

DESCRIPTIVE NOTE: 52P. PRICE CODE: PC A04/MF A01; PB82-196822

ABSTRACT: THIS PROGRAM WAS UNDERTAKEN IN AN EFFORT TO DEVELOP AN ANALYTICAL METHOD FOR THE DETERMINATION OF 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TCDD) IN INDUSTRIAL AND MUNICIPAL WASTEWATERS. THE DETECTION LIMIT WAS FOUND TO BE 0.003 MICROGRAM/L. IT WAS FOUND THAT TCDD SOLUTIONS PREPARED IN BENZENE, ACETONE AND METHANOL REMAINED STABLE DURING BOTH COLD STORAGE (4C) AND AT ROOM TEMPERATURE (25C). HOWEVER, DEGRADATION OF TCDD IN WATER WAS OBSERVED AS A RESULT OF CHLORINATED FOLLOWED BY PROLONGED STORAGE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008099
PUBLICATION DATE: MAR 82

TITLE: DETERMINATION OF NITROSAMINES IN INDUSTRIAL AND MUNICIPAL WASTEWATERS.

PERSONAL AUTHOR: RHOADES, JOHN W.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHROMATOGRAPHY; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; MUNICIPAL WASTES; *NITROSAMINES; *RESEARCH REPORTS; *WASTEWATER; WATER QUALITY

DESCRIPTIVE NOTE: 98P. PRICE CODE: PC A05/MF A01; PB82-199621

ABSTRACT: THE PROCEDURAL STEPS OF SAMPLE PRESERVATION, EXTRACTION, CLEANUP OF EXTRACTS, AND GAS CHROMATOGRAPHIC SEPARATION AND DETECTION IN THE ANALYSIS OF THREE N-NITROSAMINES WERE STUDIED. RECOVERIES OF THE SUBSTANCES FOR CLEAN WATER AND WASTEWATER WERE MEASURED, AND ASSESSMENTS OF ACCURACY AND PRECISION WERE MADE. THE METHOD IS SATISFACTORY FOR USE WITH AFID FOR THE ANALYSIS OF CLEAN WATER AND WASTEWATER HAVING A RELATIVELY LOW BACKGROUND OF INTERFERENCES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008100
PUBLICATION DATE: JAN 82

TITLE: BIOLOGICAL PROCESSES IN THE TREATMENT OF MUNICIPAL WATER SUPPLIES.

PERSONAL AUTHOR: RICE, RIP G.; AND OTHERS

DESCRIPTOR: *ACTIVATED CARBON; *BIOLOGICAL TREATMENT; *CASE STUDIES; MUNICIPALITIES; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *TECHNOLOGY; WATER QUALITY; WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 441P. PRICE CODE: PC A19/MF A01; PB82-199704

ABSTRACT: THE OBJECTIVE OF THIS PROJECT WAS TO STUDY THE USE OF BIOLOGICALLY ENHANCED GRANULAR ACTIVATED CARBON (BEGAC) TECHNOLOGY IN EUROPEAN WATER TREATMENT PLANTS AND TO DETERMINE ITS ADVANTAGES AND DISADVANTAGES FOR USE IN THE UNITED STATES. SEVEN EUROPEAN WATER WORKS WERE VISITED IN WHICH CHEMICAL PREOXIDATION FOLLOWED BY RAPID MEDIA FILTRATION THEN GAC ADSORPTION WAS BEING PRACTICED AND BEGAC PROCESS DETAILS WERE GATHERED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008103
PUBLICATION DATE: JUL 82

TITLE: THE ACTIVATED SLUDGE PROCESS: FUNDAMENTALS OF OPERATION.

PERSONAL AUTHOR: JUNKINS, DAVID R.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS MECHANICS; *SLUDGE; *SLUDGE TREATMENT; TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 260P. PRICE: $29.95

ABSTRACT: THIS BOOK PRESENTS A COMPREHENSIVE EXAMINATION OF THE ACTIVATED SLUDGE PROCESS AND THE OPERATION OF THE ACTIVATED SLUDGE SYSTEM. BACKGROUND INFORMATION ON PROCESS MECHANICS IS FOLLOWED BY DETAILED CONSIDERATION OF CONTROL AND TROUBLESHOOTING PRACTICES. CONTENTS INCLUDE: PROCESS MECHANICS, FACTORS AFFECTING OPERATION, PROCESS MODIFICATIONS, PROCESS MONITORING, OPERATIONAL CONTROL, TROUBLESHOOTING, AND PLANT START-UP.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008104

PUBLICATION DATE: MAY 82
TITLE: HANDBOOK OF OZONE TECHNOLOGY AND APPLICATIONS - VOLUME 1.

PERSONAL AUTHOR: RICE, RIP G.; NETZER, AHARON

DESCRIPTOR: *CHEMICAL REACTIONS; ENGINEERING; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; OZONATION; *OZONE; *POST SECONDARY EDUCATION; *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 386P. PRICE: $39.95

ABSTRACT: THIS HANDBOOK PRESENTS MATERIAL ON ALL ASPECTS OF OZONE TECHNOLOGY AND EXAMINES THE SCIENTIFIC AND ENGINEERING FACTORS RELATING TO OZONE WITH SPECIAL EMPHASIS ON ITS PROVEN APPLICATIONS. VOLUME I CONTAINS THE FOLLOWING MAIN SECTIONS: OZONE GENERATION, CONTACTING, MATERIALS OF CONSTRUCTION, ANALYTICAL ASPECTS, ENGINEERING ASPECTS, AND MECHANISMS OF ORGANIC OXIDATIONS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008105

PUBLICATION DATE: MAY 82

TITLE: URBAN SEWAGE TREATMENT PLANNING. OCTOBER, 1978-

MARCH, 1982. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *COSTS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; *RESEARCH REPORTS; *URBAN AREAS; *WASTEWATER

DESCRIPTIVE NOTE: 119P. PRICE CODE: PC N01/MF N01; PB82-807272

ABSTRACT: THE CITATIONS COVER SEWAGE TREATMENT STUDIES WHICH WOULD BE OF GENERAL INTEREST IN URBAN MANAGEMENT AND INCLUDES STUDIES ON TREATMENT COSTS, PLANNING, OPERATIONS, ALTERNATIVES, AND RATES. REPORTS WHICH DISCUSS CURRENT AND NEW PROCESSES IN A GENERAL MANNER ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 111 CITATIONS, 22 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008106

PUBLICATION DATE: APR 82

TITLE: WATER POLLUTION IN ESTUARIES AND COASTAL ZONES. 1978-FEBRUARY, 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *COASTAL ZONES; *ESTUARIES; *OCEANOGRAPHY; PLANNING; *POLLUTION CONTROL; *RESEARCH REPORTS; SEWAGE; SOLID WASTES; URBANIZATION; WASTE DISPOSAL; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 139P. PRICE CODE: PC N01/MF N01; PB82-807603

ABSTRACT: THE BIBLIOGRAPHY CONTAINS SELECTED ABSTRACTS OF RESEARCH REPORTS DEALING WITH WATER POLLUTION FROM ESTUARINE AND COASTAL DEVELOPMENT, THE EFFECTS OF THIS POLLUTION, AND ITS CONTROL. THE REPORTS ARE GENERAL IN NATURE SO AS TO BE OF INTEREST TO ANY COASTAL AREA. THE TOPICS INCLUDE POLLUTION AS RELATED TO URBANIZATION, GOVERNMENT ACTIONS, COASTAL PLANNING, NATURAL RESOURCE DEVELOPMENT, AND SEWAGE AND SOLID WASTE DISPOSAL. (THIS UPDATED BIBLIOGRAPHY CONTAINS 132 CITATIONS 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

IRIS ACCESSION NUMBER: EW008107

PUBLICATION DATE: APR 82

TITLE: DREDGING: ENVIRONMENTAL AND BIOLOGICAL EFFECTS. 1970-MARCH, 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *BIOLOGICAL FACTORS; *COASTAL ZONES; *DREDGING; *ENVIRONMENTAL IMPACTS; LAND USE; NUTRIENTS; *RESEARCH REPORTS; SEDIMENTATION; *WATER POLLUTION

DESCRIPTIVE NOTE: 212P. PRICE CODE: PC N01/MF N01; PB82-807629

ABSTRACT: WORLDWIDE RESEARCH ON DREDGING RELATED TO BIOLOGY, NUTRIENT COMPOSITION, SEDIMENTATION, AND WATER POLLUTION IS CITED. STUDIES INCLUDE DREDGING OF HARBORS, ESTUARIES, WATERWAYS, AND FOR MINERAL RECOVERY. THE EFFECTS OF THE DISPOSAL OF DREDGE SPOIL IN CONTAINMENT AREAS, LANDFILLS, OR OCEANS ARE CITED, AS IS DREDGE SPOIL REUSE IN LAND RECLAMATION. (THIS UPDATED BIBLIOGRAPHY CONTAINS 206 CITATIONS, 17 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008108

PUBLICATION DATE: APR 81

TITLE: GUIDANCE DOCUMENT FOR THE CONTROL OF WATER POLLUTION IN THE PHOTOGRAPHIC PROCESSING INDUSTRY.

DESCRIPTOR: *GUIDELINES; *INDUSTRIAL WASTES; *PHOTOGRAPHIC PROCESSING; *PHOTOGRAPHY; *POLLUTION CONTROL; *WASTEWATER TREATMENT; *WATER POLLUTION

DESCRIPTIVE NOTE: 271P. PRICE CODE: PC A12/MF A01; PB82-177643

ABSTRACT: THE PURPOSE OF THE GUIDANCE DOCUMENT IS TO ASSIST LOCAL AUTHORITIES AND OTHER INTERESTED PARTIES IN THE CONTROL OF WASTEWATER POLLUTANTS FROM PHOTOGRAPHIC PROCESSING FACILITIES WHERE REQUIRED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SYSTEM, 5285 PORT ROYAL ROAD, SPRINNGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW908109

PUBLICATION DATE: FEB 82

TITLE: MONITORING AND ANALYSIS OF POTABLE WATER FOR THE CITY OF PITTSFIELD, MASSACHUSETTS.

PERSONAL AUTHOR: WANG, LAWRENCE K.

DESCRIPTOR: *CASE STUDIES; *FACILITIES; *MANAGEMENT; MONITORING; *OPERATIONS (WATER); *PLANNING; POTABLE WATER; *WATER QUALITY; *WATER RESOURCES; *WATER TREATMENT

DESCRIPTIVE NOTE: 58P. PRICE CODE: PC A04/MF A01; PB82-182072

ABSTRACT: THIS REPORT INITIALLY INTRODUCES THE PITTSFIELD WATER RESOURCE SYSTEM, RESERVOIR WATER QUALITY, THE EXISTING WATER TREATMENT FACILITY, AND A NEW WATER TREATMENT PLANT UNDER CONSIDERATION. SUBSEQUENTLY A WATER QUALITY MANAGEMENT PLAN IS PROPOSED. THE PLAN INCLUDES THE REQUIRED LABORATORY FACILITIES, TECHNICAL STAFF, WATER QUALITY CONTROL

METHODOLOGY, TEST PARAMETERS, SCHEDULE, AND COST ESTIMATION. ALSO INCLUDED IS THE METHOD FOR DETERMINATION OF TRIHALOMETHANE MAXIMUM FORMATION POTENTIAL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SYSTEM, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008110

PUBLICATION DATE: MAR 82

TITLE: OIL WATER SEPARATORS. 1970-FEBRUARY, 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; COSTS; DESIGN; *EQUIPMENT; *OIL SPILLS; *OIL-WATER SEPARATION; *PERFORMANCE EVALUATION; POLLUTION CONTROL; *RESEARCH REPORTS; TECHNOLOGICAL ADVANCEMENTS; TECHNOLOGY; *WATER POLLUTION

DESCRIPTIVE NOTE: 189P. PRICE CODE: PC N01/MF N01; PB82-806704

ABSTRACT: WORLDWIDE JOURNAL RESEARCH IS CITED ON THESE DEVICES, MAINLY FOR WATER POLLUTION CONTROL. A RANGE OF EQUIPMENT IS DESCRIBED, INCLUDING GRAVITY SEPARATORS, CENTRIFUGES, MEMBRANES, COALESCERS, FILTERS, DISTILLATION COLUMNS, AND FLOTATION UNITS. OIL RECOVERY FROM OIL SPILLS IS COVERED. SEPARATION OF THESE COMPONENTS IN BALLAST AND BILGE WATER, FACTORY EFFLUENTS, PETROLEUM REFINERIES, AND WASTE OIL TREATMENT IS STUDIED. DESIGN, OPERATION, COSTS, TESTING, AND EFFICIENCY OF THESE ARTICLES ARE REPORTED. THIS UPDATED BIBLIOGRAPHY CONTAINS 186 CITATIONS, 16 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SYSTEM, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008111

PUBLICATION DATE: FEB 82

TITLE: DISINFECTANTS: CHLORINE AND CHLORINE DIOXIDE. 1978-FEBRUARY, 1982 (CITATIONS FROM THE INFORMATION RETRIEVAL, LTD. DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; CHLORINATION; *CHLORINE; *CHLORINE DIOXIDE; *DISINFECTION; *PERFORMANCE EVALUATION; PUBLIC HEALTH; *RESEARCH REPORTS; *WATER TREATMENT; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 150P. PRICE CODE: PC N01/MF N01; PB82-863085

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE ANTIMICROBIAL PROPERTIES OF CHLORINE AND CHLORINE DIOXIDE. THE USE OF CHLORINE FOR THE INACTIVATION OF VIRUSES, BACTERIA AND FUNGI IN WASTEWATER TREATMENT PLANTS IS DISCUSSED, INCLUDING THE MODE OF ACTION AND FACTORS INFLUENCING INACTIVATION. THE USE OF CHLORINE DIOXIDE AS AN ALTERNATIVE TO CHLORINE DISINFECTION IN WATER SUPPLIES AND SWIMMING POOLS IS ALSO DISCUSSED. (CONTAINS 125 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SYSTEM, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008112

PUBLICATION DATE: OCT 82

TITLE: HANDBOOK OF OZONE TECHNOLOGY AND APPLICATIONS - VOLUME 2.

PERSONAL AUTHOR: RICE, RIP G.; NETZER, AHARON

DESCRIPTOR: *DISINFECTION; *DRINKING WATER; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); OZONATION; *OZONE; *POST SECONDARY EDUCATION; RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: PRICE: $39.95

ABSTRACT: THIS HANDBOOK PRESENTS MATERIAL ON ALL ASPECTS OF OZONE TECHNOLOGY AND EXAMINES THE SCIENTIFIC AND ENGINEERING FACTORS RELATING TO OZONE WITH SPECIAL EMPHASIS ON ITS PROVEN APPLICATIONS. VOLUME 2 EXAMINES THE PRACTICAL USES OF OZONE IN DRINKING WATER TREATMENT AND IN MUNICPAL WASTEWATER TREATMENT.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008113

PUBLICATION DATE: DEC 82

TITLE: HANDBOOK OF OZONE TECHNOLOGY AND APPLICATIONS - VOLUME 3.

PERSONAL AUTHOR: RICE, RIP G.; NETZER, AHARON

DESCRIPTOR: *DISINFECTION; *HANDBOOKS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); OZONATION; *OZONE; *POST SECONDARY EDUCATION; RESEARCH REPORTS; *SWIMMING POOLS; TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: PRICE: $39.95

ABSTRACT: THIS HANDBOOK PRESENTS MATERIAL ON ALL ASPECTS OF OZONE TECHNOLOGY AND EXAMINES THE SCIENTIFIC AND ENGINEERING FACTORS RELATING TO OZONE WITH SPECIAL EMPHASIS ON ITS PROVEN APPLICATIONS. VOLUME 3 EXAMINES THE PRACTICAL USES OF OZONE IN TREATING INDUSTRIAL WATERS AND WASTEWATERS, AND IN SWIMMING POOL TREATMENT.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHER, INC., 10 TOWER PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008114
PUBLICATION DATE: DEC 82

TITLE: HANDBOOK OF OZONE TECHNOLOGY AND APPLICATIONS - VOLUME 4.

PERSONAL AUTHOR: RICE, RIP G.; NETZER, AHARON

DESCRIPTOR: *HANDBOOKS; HEALTH EFFECTS; *INSTRUCTIONAL MATERIALS; *ODORS; OZONATION; *OZONE; *POST SECONDARY EDUCATION; *PUBLIC HEALTH; RESEARCH REPORTS; TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: PRICE: $39.95

ABSTRACT: THIS HANDBOOK PRESENTS MATERIAL ON ALL ASPECTS OF OZONE TECHNOLOGY AND EXAMINES THE SCIENTIFIC AND ENGINEERING FACTORS RELATING TO OZONE WITH SPECIFIC EMPHASIS ON ITS PROVEN APPLICATIONS. VOLUME 4 EXAMINES THE USE OF OZONE IN ODOR CONTROL. ALSO REVIEWED ARE THE PUBLIC HEALTH ASPECTS OF OZONE.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008115

PUBLICATION DATE: 82

TITLE: ENVIRONMENTAL ENGINEERING.

PERSONAL AUTHOR: VESILIND, P. AARNE; PEIRCE, J. JEFFREY

DESCRIPTOR: AIR POLLUTION; AIR QUALITY; *ENGINEERING; *ENVIRONMENTAL ENGINEERING; HAZARDOUS WASTES; *INSTRUCTIONAL MATERIALS; LABORATORY TECHNIQUES; LEGAL ASPECTS; *POLLUTION CONTROL; *POST SECONDARY EDUCATION; WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 602P. PRICE: $29.95

ABSTRACT: THIS TEXTBOOK PRESENTS A COMPREHENSIVE EXAMINATION OF ENVIRONMENTAL ENGINEERING. CHAPTERS INCLUDE: ENVIRONMENTAL ENGINEERING, WATER POLLUTION, MEASUREMENT OF WATER QUALITY, WATER SUPPLY, WATER TREATMENT, COLLECTION OF WASTEWATER, WASTEWATER TREATMENT, SLUDGE TREATMENT AND DISPOSAL, NONPOINT SOURCE WATER POLLUTION, WATER POLLUTION LAW, SOLID WASTE, SOLID WASTE DISPOSAL, RESOURCE RECOVERY, HAZARDOUS WASTE, RADIOACTIVE WASTE, SOLID AND HAZARDOUS WASTE LAW, AIR POLLUTION LAW, NOISE POLLUTION, NOISE MEASUREMENT AND CONTROL, ENVIRONMENTAL IMPACT AND ECONOMIC ASSESSMENT, AND THE ENVIRONMENTAL ETHIC.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008116
PUBLICATION DATE: 81

TITLE: LABORATORY MANAGEMENT.

DESCRIPTOR: *CERTIFICATION; *EMPLOYMENT QUALIFICATIONS; *GUIDELINES; *INSTRUCTIONAL MATERIALS; *LABORATORIES; *LABORATORY TRAINING; *MANAGEMENT; *PERSONNEL; *RECORD KEEPING; *RECORDS; *TECHNOLOGICAL ADVANCEMENTS; *TRAINING NEEDS

DESCRIPTIVE NOTE: 56P. PRICE: $6.00 MEMBERS; $8.00 NON-MEMBERS

ABSTRACT: THIS TEXT PRESENTS GUIDELINES FOR THE EFFLUENT AND PRODUCTIVE OPERATION OF A LABORATORY. CHAPTERS ADDRESS VARIOUS TOPICS INCLUDING: JOB DESCRIPTIONS, PERSONNEL REQUIREMENTS, TRAINING NEEDS, PLANNING FOR FUTURE TECHNOLOGICAL NEEDS, UPDATING PERSONNEL ON CHANGES, RECORD KEEPING, AND CERTIFICATION OF LABORATORY PERSONNEL.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., NW, WASHINGTON, DC 200371

IRIS ACCESSION NUMBER: EW008117

PUBLICATION DATE: JUN 82

TITLE: HOW TO REPAIR PUMPS ECONOMICALLY.

DESCRIPTOR: *CASE STUDIES; EPOXY; *EQUIPMENT; *GUIDELINES; *MAINTENANCE; *PUMPS; *REPAIRS

ABSTRACT: THIS ARTICLE OUTLINES THE BASIC REPAIR STEPS WHEN UTILIZING CERAMIC-FILLED EPOXY COMPOUNDS TO REPAIR PUMPS. THE TWO-STEP PUMP REPAIR USES LIQUID AND PUTTY EPOXIES TO FILL CAVITATED SECTIONS OF A PUMP CASING AND REBUILD THE SURFACE TO ITS ORIGINAL DIMENSIONS.

AVAILABILITY: ENGINEER'S DIGEST V10 N6

IRIS ACCESSION NUMBER: EW008118

PUBLICATION DATE: JUL 82

TITLE: COLORADO WATER RIGHTS--AN ENGINEER'S CASE STUDIES.

PERSONAL AUTHOR: FASSETT, GORDON W.

DESCRIPTOR: AGRICULTURE; *CASE STUDIES; *COLORADO; *ENGINEERING; *IRRIGATION; *LEGAL ASPECTS; *MUNICIPALITIES; *NATURAL RESOURCES; *PLANNING; RECREATION; *WATER RESOURCES; *WATER RIGHTS; *WATER SUPPLY; *WATER USE

DESCRIPTIVE NOTE: 324-331P.

ABSTRACT: THIS ARTICLE DESCRIBES THE STUDIES WATER ENGINEERS MUST MAKE TO SUPPORT A CONTEMPLATED CHANGE IN THE USE AND DIVERSION POINT OF WATER RIGHTS UNDER THE PRIOR

APPROPRIATION DOCTRINE. THE GROWING COMMUNITY OF AURORA, COLO.-A DENVER SUBURB-NEEDS TO ACQUIRE RIGHTS TO ADDITIONAL WATER FOR MUNICIPAL USE. DETAILED ENGINEERING STUDIES WERE NECESSARY TO DETERMINE AS NEARLY AS POSSIBLE THE ACTUAL AMOUNT OF AVAILABLE WATER THAT PREVIOUSLY HAS BEEN USED FOR AGRICULTURAL IRRIGATION. THE CHANGE OF USE, SUPPORTED BY THE ENGINEERING STUDIES, IS NOW UNDER CONSIDERATION BY THE WATER COURT TO ENSURE THAT JUNIOR HOLDERS OF WATER RIGHTS WILL NOT BE HARMED BY THE CHANGE. A SECOND CASE STUDY DESCRIBES A WATER AUGMENTATION PLAN FOR EXPANDING A RECREATIONAL DEVELOPMENT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008119

PUBLICATION DATE: JUL 82

TITLE: EAST IS WEST AND WEST IS WEST: HAVE THE TWAIN MET?

PERSONAL AUTHOR: CAHILL, THOMAS E.

DESCRIPTOR: *CASE STUDIES; *LEGAL ASPECTS; MANAGEMENT; *NATURAL RESOURCES; *PLANNING; REGULATIONS; *RIPARIAN DOCTRINE; *STATE-OF-THE-ART REVIEWS; *WATER RESOURCES; *WATER RIGHTS; WATER SUPPLY; WATER USE

DESCRIPTIVE NOTE: 332-333P.

ABSTRACT: AS COMPETITION FOR WATER RESOURCES HAS INCREASED FROM BIBLICAL TIMES TO THE PRESENT, LEGAL SYSTEMS FOR THE EQUITABLE ALLOCATION OF WATER HAVE BEEN DEVISED. IN HUMID STATES WHERE THE RIPARIAN DOCTRINE WAS ADOPTED, CHARACTERISTICS OF THE APPROPRIATION DOCTRINE, FIRST USED TO ALLOCATE WATER IN ARID AND SEMIARID REGIONS, ARE EMERGING. NO MATTER WHAT TERMINOLOGY IS USED TO DESCRIBE WATER USE REGULATIONS, THE LEGAL PREMISE IS THAT A NEW, REASONALBLE USE BY OTHERS WHO WOULD BE AFFECTED. PERMIT SYSTEMS ALLOW FOR WATER PLANNING AND MANAGEMENT IN RIPARIAN STATES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008120

PUBLICATION DATE: JUL 82

TITLE: DECENTRALIZING WATER RESOURCE PLANNING AND MANAGEMENT.

PERSONAL AUTHOR: WRIGHT, WILLIAM C.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; LAND USE; *LEGAL ASPECTS; *MANAGEMENT; *NATURAL RESOURCES; *PLANNING; *PROGRAM DESCRIPTIONS; REGULATIONS; STATE LEGISLATION; *STATE PROGRAMS; *WATER RESOURCES; *WATER SUPPLY; WATER USE

DESCRIPTIVE NOTE: 334-345P.

ABSTRACT: WILL WATER PLANS, IN THE WORDS OF THE AUTHORS, "BE MERE SHELLS FILLED WITH BLANK PAGES"? SUCCESSFUL WATER PLANNING IN EASTERN STATES DEPENDS NOT ONLY ON RECOGNITION OF THE NEED FOR GOOD PLANNING BUT ALSO ON PUBLIC PARTICIPATION AND EACH STATE'S LEGISLATIVE SUPPORT AND FUNDING TO IMPLEMENT PLANS. EXAMPLES OF EFFORTS TO DEVELOP STATE WATER PLANS IN EASTERN STATES ARE DISCUSSED AND COMPARED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008121

PUBLICATION DATE: JUL 82

TITLE: ANALYSIS OF WATER SUPPLY COSTS IN THE WASHINGTON (D.C.) AREA.

PERSONAL AUTHOR: CLARK, ROBERT M.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *COST EFFECTIVENESS; COSTS; ECONOMIC FACTORS; *MANAGEMENT; *NATURAL RESOURCES; *OPERATIONS (WATER); *PLANNING; *WASHINGTON D.C.; *WATER RESOURCES; *WATER SUPPLY; WATER USE

DESCRIPTIVE NOTE: 347-357P.

ABSTRACT: THIS ARTICLE COMPARES THE COSTS OF ALTERNATIVE METHODS OF SUPPLYING THE GROWING WASHINGTON, D.C., METROPOLITAN AREA WITH ADEQUATE WATER TO MEET FUTURE DEMANDS IN CASE OF SEVERE DROUGHT-CAUSED LOW FLOWS IN THE POTOMAC RIVER. RISKS OF DEFICITS WILL RISE SIGNIFICANTLY OVER THE NEXT 50 YEARS IF CURRENT GROWTH AND PER CAPITA CONSUMPTION PATTERNS CONTINUE. BECAUSE OF AN APPARENT ABUNDANCE OF WATER AT THIS TIME, LITTLE EFFORT HAS BEEN MADE TO PLAN IN ADVANCE FOR SEORTAGES, LEAVING THE AREA HIGHLY VULNERABLE AS THE YEARS GO BY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008122

PUBLICATION DATE: JUL 82

TITLE: THE ECONOMICS OF MUNICIPAL WASTEWATER REUSE.

PERSONAL AUTHOR: YOUNG, C. EDWIN

DESCRIPTOR: *COST EFFECTIVENESS; *ECONOMIC FACTORS; LAND APPLICATION; *MODELS; *MUNICIPALITIES; *NATURAL RESOURCES; *RECYCLING; *WASTEWATER REUSE; *WASTEWATER TREATMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 358-361P.

ABSTRACT: A MODEL WAS DEVELOPED TO EVALUATE THE FEASIBILITY OF REUSING MUNICIPAL WASTEWATER. FACTORS SUCH AS THE SUPPLY AND DEMAND FOR WASTEWATER, THE DEGREE TO WHICH WASTEWATER

MUST BE TREATED FOR ITS INTENDED APPLICATION, THE CHARACTERISTICS OF THE END PRODUCT, AND DISPOSAL OPTIONS CAN BE CONSIDERED IN THE DEVELOPMENT OF REUSE OPTIONS. IN SOME CASES, IT COULD BE MORE ECONOMICAL TO PAY SOMEONE TO REUSE WASTEWATER THAN TO DISPOSE OF IT IN ANOTHER MANNER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008123

PUBLICATION DATE: JUL 82

TITLE: DETERMINING FREE AVAILABLE CHLORINE BY DPD-COLORIMETRIC, DPD-STEADIFAC (COLORIMETRIC), AND FACTS PROCEDURES.

PERSONAL AUTHOR: COOPER, WILLIAM J.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINE; *DISINFECTION; *FREE RESIDUAL CHLORINE; *LABORATORY PROCEDURES; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WATER TREATMENT

DESCRIPTIVE NOTE: 362-369P.

ABSTRACT: THIS PAPER DESCRIBES THE PERFORMANCE OF THREE METHODS FOR DETERMINING FREE RESIDUAL CHLORINE. CONSIDERATION IS GIVEN TO INTERFERENCES FROM COMBINED CHLORINE, COLOR FORMATION AND STABILITY, REAGENT STABILITY, THEORETICAL DETECTION LIMITS, AND ACCURACY AND PRECISION OF DATA, AS WELL AS THE FEASIBILITY OF PREPARING PURE AQUEOUS SOLUTIONS OF NITROGEN TRICHLORIDE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008124

PUBLICATION DATE: JUL 82

TITLE: EVALUATING THE POTENTIAL FOR CONTAMINATING DRINKING WATER FROM THE CORROSION OF TIN-ANTIMONY SOLDER.

PERSONAL AUTHOR: HERRERA, CARLOS E.; AND OTHERS

DESCRIPTOR: *CONTAMINATION; *CORROSION; *DRINKING WATER; *LEAD; *PLUMBING; POTABLE WATER; *PUBLIC HEALTH; *RESEARCH REPORTS; *SOLDER; *TIN-ANTIMONY; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 368-375P.

ABSTRACT: CORROSION OF LEAD-BASED SOLDERS IN PLUMBING CAN PRESENT A SIGNIFICANT PUBLIC HEALTH HAZARD. REPLACING LEADBASED SOLDER WITH TIN-ANTIMONY SOLDER WILL REMOVE LEAD FROM POTABLE WATER, ALTHOUGH THE FULL SIGNIFICANCE OF ANTIMONY IN WATER IS NOT KNOWN. IN THIS PAPER, THE BEHAVIOR OF TIN-ANTIMONY SOLDER IN CORROSIVE WATER IS CONSIDERED FROM BOTH THEORETICAL AND EXPERIMENTAL STANDPOINTS. SACRIFICIAL CORROSION OF TIN TO FORM TIN OXIDE, A PASSIVATING FILM, PROTECTS THE SURFACE OF THE SOLDER FROM CORROSION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008125

PUBLICATION DATE: JUL 82

TITLE: DISINFECTION.

DESCRIPTOR: CHLORAMINES; CHLORINE; CHLORINE DIOXIDE; *DISINFECTION; *DRINKING WATER; OZONE; *POTABLE WATER; *RECOMMENDATIONS; *RESEARCH REPORTS; *WATER SUPPLY; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 376-380P.

ABSTRACT: CHLORINE IS USED WIDELY IN THE UNITED STATES TO DISINFECT POTABLE WATER. HOWEVER, SEVERAL OTHER CHEMICALS ALSO ARE USED AS DISINFECTANTS. IN THIS REPORT, THE DISINFECTION COMMITTEE DISCUSSES ADVANTAGES AND DISADVANTAGES OF USING OZONE, CHLORAMINES, AND CHLORINE DIOXIDE, AS WELL AS CHLORINE, AS WATER DISINFECTANTS. THE COMMITTEE ALSO CONSIDERS THE USE OF INDICATOR ORGANISMS AS A MEASURE OF EFFECTIVE DISINFECTION. THIS REPORT WAS APPROVED UNANIMOUSLY BY THE TECHNICAL AND PROFESSIONAL COUNCIL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N7

IRIS ACCESSION NUMBER: EW008126

PUBLICATION DATE: JUL 82

TITLE: MANAGING THE NPDES PROGRAM?

DESCRIPTOR: *ADMINISTRATION; COMPUTER APPLICATIONS; DATA BASES; *EFFLUENTS; *ENVIRONMENTAL PROTECTION AGENCY; *MANAGEMENT; *MONITORING; *NPDES; OPERATIONS; PERMITS; *POLLUTION CONTROL; *PROGRAM DESCRIPTION; *WATER QUALITY

DESCRIPTIVE NOTE: 1057-1060P.

ABSTRACT: THIS ARTICLE REVIEWS THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) ADMINISTERED BY THE ENVIRONMENTAL PROTECTION AGENCY. THE ARTICLE DESCRIBES THE FLOW OF INFORMATION THROUGH THE SYSTEM, PROGRAM MANAGEMENT AND ADMINISTRATION, HISTORY AND USAGE OF THE SYSTEM, MONITORING AND MONITORS, AND STATE REACTIONS. THE ARTICLE FOCUSES DISCUSSION ON THE IMMENSE SIZE OF THE SYSTEM AND THE RESULTING PROGRAM OPERATION AND PAPERWORK PROBLEMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008127

PUBLICATION DATE: JUL 82

TITLE: MUNICIPAL PRETREATMENT PROGRAM DEVELOPMENT.

PERSONAL AUTHOR: COOLEY, ROBERT V.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; COST EFFECTIVENESS; EFFLUENTS; *ENVIRONMENTAL PROTECTION AGENCY; *INDUSTRIAL WASTES; *MONITORING; *MUNICIPALITIES; *POLLUTION CONTROL; *PRETREATMENT; *PROGRAM DESCRIPTIONS; *PROGRAM DEVELOPMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1067-1077P.

ABSTRACT: THE U. S. ENVIRONMENTAL PROTECTION AGENCY (EPA) HAS ESTABLISHED THROUGH FEDERAL REGULATIONS THE GENERAL FRAMEWORK THAT LOCAL AGENCIES MUST FOLLOW IN DEVELOPING PRETREATMENT PROGRAMS TO CONTROL INDUSTRIAL DISCHARGES. HOWEVER, EACH PROGRAM MUST BE TAILORED TO ADDRESS THE NEEDS AND CONSTRAINTS SPECIFIC TO THE LOCAL AGENCY. THREE CASE HISTORIES ARE DESCRIBED, HIGHLIGHTING DIFFERENT ASPECTS IN PROGRAM DEVELOPMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008128

PUBLICATION DATE: JUL 82

TITLE: ADVANCED BIOLOGICAL TREATMENT TO ACHIEVE NUTRIENT REMOVAL.

PERSONAL AUTHOR: BURDICK, CHUCK R.; AND OTHERS

DESCRIPTOR: *ADVANCED TREATMENT; *ALTERNATE TECHNOLOGIES; *BARDENPHO PROCESS; *BIOLOGICAL TREATMENT; *CASE STUDIES; *COST EFFECTIVENESS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SECONDARY TREATMENT; TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1078-1086P.

ABSTRACT: THE BARDENPHO PROCESS IS AN ADVANCED SECONDARY TREATMENT SYSTEM CAPABLE OF REMOVING NITROGEN AND PHOSPHORUS WITHOUT CHEMICAL ADDITION. THE PROCESS CONSISTS OF A FERMENTATION ZONE FOLLOWED BY A FOUR-STAGE, COMPLETE-MIX ACTIVATED SLUDGE PROCESS WITH ALTERNATING ANOXIC AND AEROBIC CONDITIONS. THE CITY OF PALMETTO, FLA., CONSTRUCTED THE FIRST BARDENPHO FACILITY IN NORTH AMERICA. PLANT OPERATION SINCE JANUARY 1980 HAS CONSISTENTLY ACHIEVED 99% REMOVAL OF BIOCHEMICAL OXYGEN DEMAND AND SUSPENDED SOLIDS, 93.4% REMOVAL OF TOTAL NITROGEN, AND 70% REMOVAL OF TOTAL PHOSPHORUS. COST ANALYSIS DETERMINED EQUIVALENT ANNUAL COST OF AN ADVANCED SECONDARY TREATMENT SYSTEM WAS APPROXIMATELY 29% LOWER THAN FOR A CONVENTIONAL TWO-SLUDGE NITRIFICATION-DENITRIFICATION SYSTEM. IN ADDITION, CONSTRUCTION COSTS OF A BARDENPHO WASTEWATER PLANT ARE ONLY INCREMENTALLY HIGHER THAN COSTS FOR AN EXTENDED AERATION SECONDARY TREATMENT PLANT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008129

PUBLICATION DATE: JUL 82

TITLE: HIGH-QUALITY TRICKLING FILTER EFFLUENT WITHOUT TERTIARY TREATMENT.

PERSONAL AUTHOR: NORRIS, DAN P.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *CLARIFICATION; *DESIGN; EFFLUENTS; *EQUIPMENT; FILTERS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SECONDARY TREATMENT; *SEDIMENTATION; SLUDGE; SUSPENDED SOLIDS; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1087-1098P.

ABSTRACT: CONVENTIONAL DESIGN PRACTICE NORMALLY WOULD MANDATE COSTLY TERTIARY FILTRATION TO MEET ADVANCED WASTEWATER TREATMENT EFFLUENT CRITERIA AND EITHER CHEMICAL TREATMENT OR TERTIARY FILTRATION FOR ADVANCED SECONDARY TREATMENT CRITERIA. BOTH CRITERIA HAVE BEEN INEXPENSIVELY MET BY RELATIVELY SIMPLE DESIGN MODIFICATIONS TO THE SECONDARY SEDIMENTATION PROCESS IN A TRICKLING FILTER PLANT AT CORVALLIS, OREG. THE NEW PROCESS IS TERMED THE TRICKLING FILTER/SOLIDS-CONTACT PROCESS, WHICH USES SOLIDS-CONTACT CLARIFIERS FOR SUPERIOR SUSPENDED SOLIDS REMOVAL FROM WASTEWATER TREATED BY TRICKLING FILTERS. SLUDGE IS RECIRCULATED TO AN AERATED CHANNEL AHEAD OF THE CLARIFIERS TO DEVELOP A MIXED LIQUOR THAT ENHANCES SOLIDS CONTACT. THE SECONDARY SEDIMENTATION TANKS FEATURE CENTER WELLS WITH MECHANICAL FLOCCULATORS THAT PROVIDE A MILDLY STIRRED ENVIRONMENT SO THAT FINELY DIVIDED MATERIAL IS AGGLOMERATED INTO FLOC THAT SETTLES WELL. NO CHEMICALS ARE ADDED TO THE SEDIMENTATION TANKS. MANY EXISTING TRICKLING FILTERS CAN BE UPGRADED TO THIS LEVEL OF TREATMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008130

PUBLICATION DATE: JUL 82

TITLE: MANAGEMENT AND CONTROL TECHNOLOGY FOR URBAN STORMWATER POLLUTION.

PERSONAL AUTHOR: FINNEMORE, E. JOHN; LYNARD, WILLIAM G.

DESCRIPTOR: *COMBINED SEWERS; *MANAGEMENT; *PERFORMANCE EVALUATION; *PLANNING; *POLLUTION CONTROL; *SURFACE RUN-OOF; *SEWERS; *STORMWATER; TECHNOLOGY; *URBAN AREAS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 1099-1111P.

ABSTRACT: PROVEN AND PROMISING APPROACHES FOR MANAGING AND

CONTROLLING WATER POLLUTION CAUSED BY URBAN RUNOFF AND COMBINED SEWER OVERFLOWS ARE SUMMARIZED FOR PLANNERS AND DESIGNERS. BEST MANAGEMENT PRACTICES USED TO CONTROL URBAN RUNOFF ARE EMPHASIZED BECAUSE OF THEIR GREAT POTENTIAL. THEY INCLUDE INSTITUTIONAL APPROACHES, LAND USE PLANNING, STREET CLEANING, EROSION CONTROLS, PERCOLATION PONDS, AND DETENTION/SEDIMENTATION BASINS, WITH THE MAJOR EMPHASIS ON SOURCE STORAGE. STRUCTURAL MEASURES-INCLUDING IN-LINE AND OFF-LINE STORAGE, SEDIMENTATION, AND BIOLOGICAL TREATMENT LAGOON-ARE USED PRIMARILY TO CONTROL COMBINED SEWER OVERFLOWS. INTEGRATED SYSTEMS, WITH STORAGE AGAIN THE MOST IMPORTANT ELEMENT, HOLD GREAT PROMISE FOR AREAWIDE CONTROL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008131

PUBLICATION DATE: JUL 82

TITLE: EFFECT OF ACTIVATED SLUDGE OPERATIONAL CONDITIONS ON SLUDGE THICKENING CHARACTERISTICS.

PERSONAL AUTHOR: TUNTOOLAVEST, MUNSIN; GRADY, C. P. LESLIE, JR.

DESCRIPTOR: *ACTIVATED SLUDGE; *CASE STUDIES; *OPERATIONS (WASTFWATER); *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; *SLUDGE; *SLUDGE TREATMENT; SLUDGE VOLUME INDEX; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1110-1117P.

ABSTRACT: RESEARCH WAS CONDUCTED ON TWO PARALLEL ACTIVATED SLUDGE PILOT PLANTS, EACH WITH A NOMINAL FLOW RATE OF 1.9 1/MIN AND A SOLIDS RETENTION TIME OF 10 DAYS, TO DETERMINE HOW THE MIXED LIQUOR SUSPENDED SOLIDS CONCENTRATION, THE AIR FLOW RATE, AND THE SLUDGE RECYCLE RATIO INFLUENCED THE THICKENING CHARACTERISTICS OF THE SLUDGE. EVALUATIONS OF BOTH THE SLUDGE VOLUME INDEX AND THE ZONE SETTLING VELOCITY OF THE SLUDGE REVEALED NO CLEAR EFFECTS OF THE INDEPENDENT VARIABLES ON ITS THICKENING CHARACTERISTICS, WHEREAS THOSE SAME CONDITIONS HAD VERY DEFINITE EFFECTS ON ITS CLARIFICATION CHARACTERISTICS. THIS SUGGESTS THAT IT SHOULD BE POSSIBLE TO ALTER THE OPERATIONAL CONDITIONS ON A PLANT TO MODIFY THE SLUDGE'S CLARIFICATION CHARACTERISTICS WITHOUT A LARGE RISK OF CHANGING ITS THICKENING CHARACTERISTICS SUFFICIENTLY TO MAKE THE SETTLER FAIL IN THICKENING.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008133

PUBLICATION DATE: JUL 82

TITLE: BIOOXIDATION OF PAINT PROCESS WASTEWATER.

PERSONAL AUTHOR: BROWN, JAMES A.; WEINTRAUB, MARVIN

DESCRIPTOR: *ACTIVATED SLUDGE; *BIOOXIDATION; *EFFLUENTS; *INDUSTRIAL WASTES; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *OXIDATION; *PAINT; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1127-1130P.

ABSTRACT: THIS REPORT DESCRIBES STUDIES DESIGNED TO DETERMINE THE FEASIBILITY OF UTILIZING BIOOXIDATION TO TREAT A PAINT PROCESS WASTEWATER EFFLUENT. THESE EXPERIMENTS SHOW THAT THIS INDUSTRIAL EFFLUENT COULD BE EFFECTIVELY TREATED BY THE ACTIVATED SLUDGE PROCESS AND WOULD NOT BE HARMFUL TO A MUNICIPAL WASTEWATER TREATMENT SYSTEM AT THE CONCENTRATIONS STUDIED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008134

PUBLICATION DATE: JUL 82

TITLE: WATER QUALITY STANDARDS AND WATER QUALITY.

PERSONAL AUTHOR: LEE, G. FRED; AND OTHERS

DESCRIPTOR: *ASSESSMENT; *CRITERIA; *ENVIRONMENTAL PROTECTION AGENCY; *HAZARD ASSESSMENT; *RECOMMENDATIONS; *REGULATIONS; *STANDARDS; *WATER USE; *WATER QUALITY

DESCRIPTIVE NOTE: 1131-1138P.

ABSTRACT: EPA HAS, IN ACCORDANCE WITH ITS CHARGE IN PL 92-500, DEVELOPED WATER QUALITY CRITERIA THAT ARE TO SERVE AS A BASIS FOR STATE WATER QUALITY STANDARDS. BECAUSE THESE ARE GENERALLY "WORST-CASE" CRITERIA, THEIR APPLICATION DIRECTLY AS NUMERIC WATER QUALITY STANDARDS, AS ADVOCATED BY EPA POLICY, IS BEING MET WITH INCREASING OPPOSITION FROM THE TECHNICAL AS WELL AS MANAGEMENT COMMUNITIES. THE AUTHORS DISCUSS THE CONCEPT-DEFINITION OF WATER QUALITY AND HOW WATER QUALITY MUST BE EVALUATED IN TERMS OF ITS DESIRED BENEFICIAL USES. BECAUSE THERE ARE A VARIETY OF PHYSICAL, CHEMICAL, AND BIOLOGICAL FACTORS THAT IMPACT HOW A CHEMICAL AFFECTS WATER AT DIFFERENT SITES, WATER QUALITY STANDARDS SHOULD BE DEVELOPED ON A SITE-SPECIFIC BASIS. THE USE OF THE HAZARD ASSESSMENT APPROACH IN DEVELOPING SUCH STANDARDS IS DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008135

PUBLICATION DATE: JUL 82

TITLE: WATER QUALITY IN URBAN STREAMS--WHAT WE CAN EXPECT.

PERSONAL AUTHOR: DUDA, ALFRED M.; AND OTHERS

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *CASE STUDIES;

MONITORING; *RESEARCH REPORTS; RUNOFF; SAMPLING; STANDARDS; *STREAMS; *URBAN AREAS; *WATER QUALITY

DESCRIPTIVE NOTE: 1139-1147P.

ABSTRACT: AQUATIC BIOLOGICAL MONITORING, SAMPLING FOR WATER CHEMISTRY, AND CHEMICAL ANALYSES OF BOTTOM MATERIAL WERE USED TO ASSESS WATER QUALITY IN TWO URBAN STREAMS. COMPARISONS WERE ALSO MADE WITH AN UPSTREAM, FORESTED, CONTROL REACH.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008136

PUBLICATION DATE: JUL 82

TITLE: RECYCLING OF MERCURY AND SILVER FROM COD TESTS.

PERSONAL AUTHOR: ASLAM, SYED; WALKER, OTIS L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL OXYGEN DEMAND; EFFLUENTS; INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *MERCURY; *METAL RECOVERY; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RECYCLING; *RESEARCH REPORTS; *SILVER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1148-1151P.

ABSTRACT: A SIMPLE METHOD HAS BEEN DEVELOPED TO REMOVE AND ISOLATE MERCURY AND SILVER FROM THE WASTE BY-PRODUCT OF THE CHEMICAL OXYGEN DEMAND (COD) TEST. THE REMOVAL OF MERCURY AND SILVER FROM THE WASTE IS 98.0% AND 99.9%, RESPECTIVELY. THE RECLAIMED AND PURIFIED SILVER AND MERCURY CAN BE USED OVER AND OVER AGAIN IN SUBSEQUENT COD TESTS, THEREBY REDUCING THE COST OF PERFORMNG THE TEST BY AS MUCH AS 70%. THE COD ANALYSIS OF MORE THAN 30 DIFFERENT SAMPLES, USING THE RECLAIMED SILVER AND MERCURY, COMPARES VERY WELL TO THE STANDARD METHOD, WHICH USES SILVER SULFATE AND MERCURIC SULFATE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N7

IRIS ACCESSION NUMBER: EW008142

PUBLICATION DATE: JUL 82

TITLE: PUTTING ENERGY CONTROLS TO WORK.

DESCRIPTOR: *CASE STUDIES; *COOLING; *COST EFFECTIVENESS; *ENERGY CONSERVATION; *EQUIPMENT; *FACILITIES; *HEATING

DESCRIPTIVE NOTE: 45-47P.

ABSTRACT: THIS ARTICLE PRESENTS CASE STUDIES OF ENERGY CONSERVATION DEVICES THAT ARE BEING USED BY LOCAL GOVERNMENTS IN BOTH OLD AND NEW STRUCTURES. THE ENERGY CONTROLS DISCUSSED INCLUDE THOSE DESIGNED TO LOWER HEATING AND COOLING COSTS. COST EFFECTIVENESS, INSTALLATION AND OPERATION ARE ALL EXAMINED.

AVAILABILITY: AMERICAN CITY 8 COUNTY V97 N7

IRIS ACCESSION NUMBER: EW008143

PUBLICATION DATE: JUL 82

TITLE: LIGHT YOUR WAY TO ENERGY SAVINGS.

DESCRIPTOR: *COST EFFECTIVENESS; *DESIGN; *ENERGY CONSERVATION; *EQUIPMENT; *LIGHTING SYSTEMS; LIGHTS; *PERFORMANCE EVALUATION; *PRODUCTIVITY

DESCRIPTIVE NOTE: 49-51P.

ABSTRACT: THIS ARTICLE DISCUSSES IN DETAIL THE ADVANTAGES AND DISADVANTAGES OF VARIOUS MODERN LIGHTING SYSTEMS. THE SYSTEMS ARE EXAMINED FOR COST EFFECTIVENESS, APPLICATIONS, LIFE-EXPECTANCY, AND EFFECT ON WORKER PRODUCTIVITY.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97- N7

IRIS ACCESSION NUMBER: EW008144

PUBLICATION DATE: JUL 82

TITLE: HOW DO YOUR BUILDINGS MEASURE UP ENERGY-WISE?

PERSONAL AUTHOR: VERNON, ROBERT G.

DESCRIPTOR: *BUILDINGS; *CASE STUDIES; *COST EFFECTIVENESS; *ENERGY CONSERVATION; EQUIPMENT; FACILITIES; *MANAGEMENT; *PROGRAM DESCRIPTIONS

DESCRIPTIVE NOTE: 63-65P.

ABSTRACT: THIS ARTICLE PRESENTS A STEP ENERGY CONSERVATION PROGRAM THAT WAS SUCCESSFULLY USED BY MICHIGAN'S DEPARTMENT OF TRANSPORTATION. THE PROGRAM INVOLVES ALL AREAS OF OPERATION AND EMPLOYS CURRENT STATE-OF-THE-ART PROCEDURES. THE PROGRAM PURPORTS TO CUT BUILDING ENERGY USE BY 5 TO 10 PERCENT THE FIRST YEAR WITH ONLY QUICK FIX MEASURES, AND UP TO 50 PERCENT OVER THE LONG RUN.

AVAILABILITY: AMERICAN CITY 8 COUNTY V97 N7

IRIS ACCESSION NUMBER: EW008145

PUBLICATION DATE: 80

TITLE: MANUAL ON SEWERAGE AND SEWAGE TREATMENT (FIRST EDITION).

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *ENGINEERING; *FACILITIES; GUIDELINES; *INSTRUCTIONAL MATERIALS; *MANUALS; *PLANNING; PUBLIC HEALTH; *TECHNOLOGICAL ADVANCEMENTS;

*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 220P. PRICE CODE: PC A10/MF A01; PB82-200163

ABSTRACT: THERE HAS BEEN A LONG FELT NEED FOR FORGING UNIFORMITY IN PLANNING, DESIGN AND CONSTRUCTION OF SEWERAGE AND SEWAGE TREATMENT FACILITIES. WITH THIS OBJECTIVE IN VIEW, THIS MANUAL LAYS EMPHASIS ON THE VARIOUS PERTINENT ASPECTS FOR EXECUTION OF COMPREHENSIVE SEWAGE COLLECTION AND TREATMENT SCHEME TO SERVE THE INTEREST OF THE PRACTICING PUBLIC HEALTH ENGINEER. THIS MANUAL HAS CONSIDERED THE RECENT TECHNICAL ADVANCES AND TRENDS IN THE FIELD OF SEWERAGE AND SEWAGE TREATMENT. ALL UNITS OF MEASUREMENTS, OPERATIONAL PARAMETERS AND DESIGN CRITERIA HAVE BEEN FURNISHED IN THE METRIC SYSTEM. OTHER APPENDICES CONTAIN USEFUL INFORMATION WHICH WILL SERVE AS A GUIDE FOR SOLVING THE PROBLEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008146

PUBLICATION DATE: MAR 82

TITLE: DETERMINATION OF NITROAROMATIC COMPOUNDS AND ISOPHORONE IN INDUSTRIAL AND MUNICIPAL WASTEWATERS.

PERSONAL AUTHOR: SHAFER, KENNETH H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *INDUSTRIAL WASTES; ISOPHORONE; *LABORATORY PROCEDURES; MUNICIPALITIES; NITROAROMATIC COMPOUNDS; *RESEARCH REPORTS; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 80P. PRICE CODE: PC A05/MF A01; PB82-208398

ABSTRACT: A METHOD WAS DEVELOPED FOR THE DETERMINATION OF NITROBENZENE, 2,4- AND 2,6-DINITROTOLUENE (DNT), AND ISOPHORONE IN WASTEWATERS. THE PROGRAM CONSISTED OF: A LITERATURE REVIEW, DETERMINATION OF THE STABILITY OF THE COMPOUNDS IN ORGANIC SOLUTIONS, DETERMINATION OF EXTRACTION EFFICIENCY FOR EACH COMPOUND FROM WATER USING TWO ORGANIC SOLVENTS, DETERMINATION OF STORAGE STABILITY OF EACH COMPOUND IN WATER, AND EVALUATION OF VARIOUS CLEAN UP TECHNIQUES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008147

PUBLICATION DATE: FEB 82

TITLE: COMPREHENSIVE DIAGNOSTIC EVALUATION AND SELECTED MANAGEMENT ISSUES.

DESCRIPTOR: ANALYTICAL TECHNIQUES; ECONOMICS; *EVALUATION; *GUIDES; *LOCAL GOVERNMENTS; *MANAGEMENT; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; STANDARDS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 161P. PRICE CODE: PC A08/MF A01; PB82-212770

ABSTRACT: THE COMPREHENSIVE DIAGNOSTIC EVALUATION PROCESS PRESENTED IN THIS PUBLICATION WAS SPECIFICALLY DESIGNED TO ASSIST LOCAL GOVERNMENT OFFICIALS AND WASTEWATER UTILITY MANAGERS IN EFFECTIVELY EVALUATING THE MANAGEMENT AND OPERATION OF WASTEWATER UTILITES AND DEVELOPING AND IMPLEMENTING MANAGEMENT SOLUTIONS TO ACHIEVE WATER QUALITY COMPLIANCE AND COST CONTROL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008148

PUBLICATION DATE: MAY 82

TITLE: BIODETERIORATION OF OIL SPILLS. 1964-MARCH 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: ALGAE; BACTERIA; *BIBLIOGRAPHIES; *BIODETERIORATION; *COASTAL ZONES; HYDROCARBONS; *OIL SPILLS; PETROLEUM; *POLLUTION CONTROL; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 148P. PRICE CODE: PC N01/MF N01; PB82-807371

ABSTRACT: THE SELECTED ABSTRACTS REPORT ON ALGAE, BACTERIA, HYDROCARBONS, PETROLEUM DEGRADATION, OIL SPILLS, BEACH CLEANUPS AND MICROBIAL DEGRADATION AS RELATED TO BIODETERIORATION OF OIL SPILLS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 146 CITATIONS, 10 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008149

PUBLICATION DATE: MAY 82

TITLE: STRIP MINING. 1976-1979 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; COAL; ECONOMICS; *ENVIRONMENTAL IMPACTS; EQUIPMENT; *LAND RECLAMATION; *LAND USE; LEGAL ASPECTS; *MINING; *REMOTE SENSING; *RESEARCH REPORTS; SAFETY; *STRIP MINING

DESCRIPTIVE NOTE: 278P. PRICE CODE: PC N01/MF N01; PB82-807439

ABSTRACT: ABSTRACTS PRIMARILY PERTAINING TO ENVIRONMENTAL IMPACTS, LAND RECLAMATION, AND SATELLITE REMOTE SENSING OF

MINES ARE CITED FROM FEDERALLY-FUNDED RESEARCH. A FEW ABSTRACTS DEAL WITH MINING EQUIPMENT, LEGAL FACTORS, ECONOMICS, AND SAFETY ASPECTS OF STRIP MINING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 273 CITATIONS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008150

PUBLICATION DATE: MAY 82

TITLE: STRIP MINING. 1980-FEBRUARY, 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; COAL; ECONOMICS; *ENVIRONMENTAL IMPACTS; EQUIPMENT; *LAND RECLAMATION; *LAND USE; LEGAL ASPECTS; *MINING; *REMOTE SENSING; *RESEARCH REPORTS; SAFETY; *STRIP MINING

DESCRIPTIVE NOTE: 156P. PRICE CODE: PC N01/MF N01; PB82-807447

ABSTRACT: ABSTRACTS PRIMARILY PERTAINING TO ENVIRONMENTAL IMPACTS, LAND RECLAMATION, AND SATELLITE REMOTE SENSING OF MINES ARE CITED FROM FEDERALLY-FUNDED RESEARCH. A FEW ABSTRACTS DEAL WITH MINING EQUIPMENT, LEGAL FACTORS, ECONOMICS, AND SAFETY ASPECTS OF STRIP MINING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 151 CITATIONS, 67 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008151

PUBLICATION DATE: MAY 82

TITLE: WATER POLLUTION ANALYSIS AND DETECTION. MARCH 1981-MARCH 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *DETECTION; EFFLUENTS; GAS CHROMATOGRAPHY; HEAVY METALS; INDUSTRIAL WASTES; *LABORATORY PROCEDURES; NEUTRON ACTIVATION; PESTICIDES; *POLLUTANTS; POTENTIOMETRY; *RESEARCH REPORTS; SPECTROSCOPY; SPOT TESTS; *WATER ANALYSES; *WATER QUALITY

DESCRIPTIVE NOTE: 94P. PRICE CODE: PC N01/MF N01; PB82-807835

ABSTRACT: THIS BIBLIOGRAPHY CITES WATER ANALYSIS TECHNIQUES, SUCH AS MASS SPECTROSCOPY, SPOT TEST, POTENTIOMETRY, GAS CHROMATOGRAPHY, AND NEUTRON ACTIVATION ANALYSIS. NUTRIENTS, DISSOLVED GASES, HEAVY METALS, CYANIDES, PESTICIDES, AND OTHER INDUSTRIAL WASTES ARE INCLUDED IN THE POLLUTANTS. SOME ARE GENERAL STUDIES. OTHERS WERE UNDERTAKEN TO ANALYZE POLLUTANTS FROM VARIOUS MEDIA, SUCH AS FRESH WATER, SALT WATER, INDUSTRIAL WASTE STREAMS, AND SEWAGE EFFLUENTS. OIL POLLUTION DETECTION AND ANALYSIS ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 87 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008152

PUBLICATION DATE: MAY 82

TITLE: SEDIMENT WATER INTERACTION AND ITS EFFECT UPON WATER QUALITY. 1979-MARCH 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *CHEMICALS; HEAVY METALS; ION EXCHANGE; NUTRIENTS; PESTICIDES; *POLLUTANTS; *RESEARCH REPORTS; *SEDIMENTATION; *SEDIMENTS; *WATER QUALITY

DESCRIPTIVE NOTE: 270P. PRICE CODE: PC N01/MF N01; PB82-807892

ABSTRACT: THE CITED RESEARCH COVERS THE RELEASE AND ABSORPTION OF CHEMICALS BY SEDIMENTS, AS IT RELATES TO WATER QUALITY. TOPICS INCLUDE NUTRIENT RECYCLING, ABSORPTION AND DESORPTION OF HEAVY METALS AND PESTICIDES, ION EXCHANGING, EFFECTS UPON BIOLOGICAL PROCESSES, THE CHEMISTRY INVOLVED, AND METHODS OF STOPPING DESORPTION. SALT WATER STUDIES HAVE BEEN EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 263 CITATIONS, 131 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008153

PUBLICATION DATE: MAY 82

TITLE: ALGAE: GROWTH AND CONTROL IN LAKES AND STREAMS. 1977-MAY 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: ALGAE; *ALGAL CONTROL; *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *BIOLOGICAL TREATMENT; *CHEMICAL TREATMENT; LAGOONS; LAKES; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; RIVERS; STREAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 159P. PRICE CODE: PC N01/MF N01; PB82-865940

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE GROWTH AND CONTROL OF ALGAL GROWTH IN LAKES, STREAMS, RIVERS, AND MANMADE LAGOONS. BIOLOGICAL AND CHEMICAL CONTROL OF ALGAL BLOOMS ARE CONSIDERED AND THEIR ADVANTAGES AND DISADVANTAGES ARE DISCUSSED. BIOLOGICAL CONTROL METHODS, INCLUDING REGULATION OF NUTRIENTS, O2 AND N2, PREDATION BY FISH, PLANKTON, SNAILS AND THE USE OF VIRUSES, BACTERIA, AND FUNGI ARE CONSIDERED. THE USE OF HERBICIDES IS ALSO

DISCUSSED. (CONTAINS 102 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008154

PUBLICATION DATE: MAY 82

TITLE: OIL SPILLS: LEGAL ASPECTS. 1977-MAY 1982 (CITATIONS FROM OCEANIC ABSTRACTS.)

DESCRIPTOR: *BIBLIOGRAPHIES; ECONOMICS; ENVIRONMENTAL PROTECTION AGENCY; INDUSTRY; *LEGAL ASPECTS; *OIL SPILLS; POLITICAL FACTORS; *POLLUTION CONTROL; PUBLIC OPINION; *RESEARCH REPORTS; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 87P. PRICE CODE: PC N01/MF N01; PB82-866211

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE LEGAL ASPECTS OF OIL SPILLS. TOPICS INCLUDE GENERAL PERSPECTIVES IN OIL SPILLS, EPA'S RESPONSE TO OIL SPILLS, LEGAL AND CORPORATE RESPONSE TO OIL SPILLS, PUBLIC INTEREST GROUPS' ATTITUDES ON OIL SPILLS, AND ECONOMIC AND POLITICAL APPROACHES TO THE PROBLEMS CAUSED BY OIL SPILLS. FEDERAL, STATE, AND LOCAL LEGISLATION DEALING WITH THESE PROBLEMS ARE EMPHASIZED. (CONTAINS 94 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008155

PUBLICATION DATE: AUG 82

TITLE: MA BELL ANSWERS METER READERS' CALL.

DESCRIPTOR: *CASE STUDIES; *COMPUTER APPLICATIONS; *COST EFFECTIVENESS; *METER READING; *METERS; *PERFORMANCE EVALUATION; *TECHNOLOGICAL ADVANCEMENTS; UTILITIES; *WATER SUPPLY; *WATER METERS

DESCRIPTIVE NOTE: 41-43P.

ABSTRACT: THIS ARTICLE DESCRIBES A FOUR MONTH TRIAL TO TEST AN AUTOMATIC WATER METER READING SYSTEM THAT EMPLOYS A CENTRALLY-LOCATED COMPUTER READER. THE COMPUTER METER READING SYSTEM IS DESCRIBED AS ARE THE ESTIMATED COST SAVINGS TO THE UTILITY AND CONSUMERS. FUTURE APPLICATIONS ARE ALSO DISCUSSED WITH EMPHASIS ON DEVELOPING A PROGRAM TO ADMINISTER, OPERATE, AND SERVICE SUCH A SYSTEM.

AVAILABILITY: AMERICAN CITY & COUNTY V97 N8

IRIS ACCESSION NUMBER: EW008156

PUBLICATION DATE: AUG 82

TITLE: NUCLEAR POWER REACTOR ACCIDENTS AND THE ROLE OF WATER SYSTEM MANAGERS.

PERSONAL AUTHOR: DAVIES, SHERWOOD; BUMSTEAD, JOHN C.

DESCRIPTOR: *DRINKING WATER; *EMERGENCY RESPONSE; *HEALTH HAZARDS; *MANAGEMENT; *OPERATIONS (WATER); *PLANNING; PUBLIC HEALTH; *RADIOACTIVE MATERIALS; *SAFETY; *WATER TREATMENT; *WATER QUALITY; WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 383-390P.

ABSTRACT: WATER UTILITIES SHOULD BE PREPARED TO COPE WITH THE REMOTE POSSIBILITY OF AN ACCIDENTAL ATMOSPHERIC RELEASE OF RADIOACTIVE MATERIALS FROM NUCLEAR POWER PLANTS OR ACCIDENTAL SPILLS OF RADIOACTIVE LIQUIDS FROM OTHER SOURCES. THE POTENTIAL HAZARDS TO HEALTH ARE DESCRIBED AND QUANTIFIED. THE AUTHORS SUGGEST REMEDIAL ACTIONS THAT COULD BE TAKEN BY WATER SUPPLIERS AND URGE THEM TO PLAN FOR SUCH A CONTINGENCY BY REHEARSING RESPONSES TO POTENTIAL RADIOACTIVE CONTAMINATION OF WATER SUPPLIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008157

PUBLICATION DATE: AUG 82

TITLE: CORRELATING A CUSTOMER INFORMATION SYSTEM WITH ONLINE SCHEDULING.

PERSONAL AUTHOR: AUSTIN, WILLIAM C., JR.

DESCRIPTOR: *COMPUTER APPLICATIONS; *CUSTOMER RELATIONS; *INFORMATION SYSTEMS; *MANAGEMENT; *PROGRAM DESCRIPTIONS; *RECORDKEEPING; *RECORDS; SCHEDULING; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 391-393P.

ABSTRACT: A SYSTEM FOR KEEPING INFORMATION CURRENT ON EACH CUSTOMER'S ACCOUNT HAS BEEN INTEGRATED WITH A SYSTEM FOR ASSIGNING PERSONNEL TO FILL CUSTOMERS' REQUESTS FOR CHANGES IN SERVICE. CUSTOMERS' TELEPHONE CALLS TO REQUEST SERVICE OR TO GIVE INSTRUCTIONS ABOUT THEIR ACCOUNTS CAN BE COORDINATED WITH EMPLOYEE WORK SCHEDULES TO ASSURE ACCURATE AND PROMPT RESPONSE. RECORDS OF TRANSACTIONS ARE EASILY ACCESSIBLE WITHOUT THE NEED FOR MANUAL FILING AND LARGE OFFICE AREAS DEVOTED TO FILING CABINETS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008158
PUBLICATION DATE: AUG 82

TITLE: ALTERNATIVES FOR CONTROLLING ORGANICS IN GROUNDWATER SUPPLIES.

PERSONAL AUTHOR: DYKSEN, JOHN E.; HESS, ALAN F., III

DESCRIPTOR: *CONTAMINATION; ECONOMIC FACTORS; *GROUNDWATER; *ORGANIC COMPOUNDS; *POLLUTION CONTROL; POTABLE WATER; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 394-403P.

ABSTRACT: SINCE SEVERAL FEDERAL AND STATE SURVEYS HAVE IDENTIFIED ORGANIC COMPOUNDS IN MANY WATER SYSTEMS SUPPLIED FROM GROUNDWATER, PRAGMATIC METHODS OF CONTROLLING SUCH CONTAMINANTS MUST BE UNDERSTOOD AND EVALUATED. SOURCE CONTROL, TREATMENT TECHNIQUES, DILUTION, AND DEVELOPING NEW SOURCES ARE DISCUSSED IN VIEW OF RELATIVE COSTS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008159

PUBLICATION DATE: AUG 82

TITLE: MOVEMENT OF ORGANIC CONTAMINANTS IN GROUNDWATER: IMPLICATIONS FOR WATER SUPPLY.
PERSONAL AUTHOR: ROBERTS, PAUL V.; AND OTHERS

DESCRIPTOR: *CONTAMINATION; *GROUNDWATER; *ORGANIC COMPOUNDS; *RESEARCH REPORTS; *WASTE DISPOSAL; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 408-413P.

ABSTRACT: CONTAMINATION OF GROUNDWATER HAS BEEN ATTRIBUTED TO WASTE DISPOSAL ACTIVITIES AND CHANCE EVENTS. CONTAMINANTS FROM BOTH OF THESE SOURCES INCLUDE ORGANIC COMPOUNDS. IN THIS PAPER, THE AUTHORS DESCRIBE THE BEHAVIOR OF ORGANIC SOLUTES IN THE SUBSURFACE ENVIRONMENT, CONSIDERING THE EFFECTS OF SORPTION, DISPERSION, ADVECTION, AND DEGRADATION. EXAMPLE CALCULATIONS ARE PRESENTED FOR SIMPLE CASES OF ONE-DIMENSIONAL, ONE-PHASE FLOW IN A SATURATED POROUS MEDIUM. THE AUTHORS ALSO CONSIDER SOME IMPLICATIONS OF THE ORGANIC CONTAMINANTS' CHARACTERISTICS FOR WATER TREATMENT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008160

PUBLICATION DATE: AUG 82

TITLE: TREATMENT OF DRINKING WATER CONTAINING TRICHLOROETHYLENE AND RELATED INDUSTRIAL SOLVENTS.

PERSONAL AUTHOR: LOVE, O. THOMAS, JR.; EILERS, RICHARD G.
DESCRIPTOR: *ACTIVATED CARBON; *DRINKING WATER; INDUSTRIAL WASTES; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SOLVENTS; *TRICHLOROETHYLENE; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 413-425P.

ABSTRACT: THE OCCURRENCE OF TRICHLOROETHYLENE AND RELATED SOLVENTS IN DRINKING WATER IS OF CONCERN TO THE USEPA. ONGOING RESEARCH IS EVALUATING THE EFFECTIVENESS OF VARIOUS TREATMENT PROCESSES IN REMOVING VOLATILE ORGANICS FROM WATER. THE AUTHORS DESCRIBE THE RESULTS OF STUDIES THAT INDICATE THESE ORGANICS CAN BE REMOVED BY AERATION, ADSORPTION ON GRANULAR ACTIVATED CARBON OR A SYNTHETIC RESIN, AND BOILING (AT THE POINT OF USE). PRELIMINARY ESTIMATES OF COSTS FOR EFFECTIVE TREATMENT ALSO ARE DISCUSSED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008161

PUBLICATION DATE: AUG 82

TITLE: DIRECT FILTRATION: POLYMER IN BACKWASH SERVES DUAL PURPOSE.

PERSONAL AUTHOR: YAPIJAKIS, CONSTANTINE
DESCRIPTOR: *BACKWASH; *DIRECT FILTRATION; *FILTRATION; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; *TURBIDITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 426-428P.

ABSTRACT: TWO PROBLEMS OF THE DIRECT FILTRATION PROCESS-LOW SOLIDS CONCENTRATION IN BACKWASH AND INITIAL TURBIDITY BREAKTHROUGH-MAY BE SOLVED BY ADDING ANIONIC POLYELECTROLYTES TO THE BACKWASHING WATER. THIS PAPER PRESENTS RESULTS FROM PILOT-PLANT TESTS THAT INCORPORATED POLYMER FEEDING. ANOTHER ADVANTAGE OF THIS TREATMENT IS THE REDUCED DISCHARGE OF WASTEWATER WHEN RELATIVELY CLEAR SUPERNATANT FROM CLARIFIERS IS RETURNED TO THE FRONT OF THE TREATMENT TRAIN.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008162

PUBLICATION DATE: AUG 82

TITLE: PERFORMANCE VARIABILITY, RANKING, AND SELECTION ANALYSIS OF MEMBRANE FILTERS FOR ENUMERATING COLIFORM BACTERIA IN RIVER WATER.

PERSONAL AUTHOR: LORENZ, RICHARD C.; AND OTHERS

DESCRIPTOR: *BACTERIA; *COLIFORM BACTERIA; *DATA ANALYSIS; *FILTERS; MEMBRANE FILTERS; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SAMPLING; *WATER QUALITY

DESCRIPTIVE NOTE: 429-437P.

ABSTRACT: STATISTICAL METHODS WERE USED TO ANALYZE PERFORMANCE OF SEVEN KINDS OF FILTERS FOR ENUMERATING COLIFORMS. INTERACTIONS AMONG FILTER, SOURCE OF SAMPLE, AND TIME OF SAMPLE COLLECTION INFLUENCED FILTER PERFORMANCES. THE EFFECTS OF SAMPLE DILUTION ON COLONY GROWTH WERE ALSO CONSIDERED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008163

PUBLICATION DATE: AUG 82

TITLE: MICROPROCESSORS: KEYED TO EFFICIENCY AND ECONOMY.

DESCRIPTOR: *COMPUTER APPLICATIONS; *EQUIPMENT; *INFORMATION SYSTEMS; MANAGEMENT; *MICROPROCESSORS; *MONITORING; *OPERATIONS (WATER); *WATER DISTRIBUTION; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 34 NEWS 8 36 NEWS

ABSTRACT: THIS ARTICLE PRESENTS A CASE STUDY OF THE REPLACEMENT OF THE MADISON, WISCONSIN WATER UTILITY TELEMETRY AND CONTROL SYSTEM WITH A MICROPROCESSOR CONTROL SYSTEM. DESCRIBED ARE THE PROBLEMS WITH THE OLD MONITORING AND CONTROL SYSTEM, THE SEARCH FOR A NEW SYSTEM, AND THE DEVELOPMENT OF THE NEW MICROPROCESSOR SYSTEM. THE HARDWARE AND SOFTWARE ARE DESCRIBED AS ARE VARIOUS ASPECTS OF SYSTEM OPERATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N8

IRIS ACCESSION NUMBER: EW008164

PUBLICATION DATE: AUG 82

TITLE: INVENTORY YOUR STAFF'S STRENGTHS.

PERSONAL AUTHOR: PETERSON, ROY

DESCRIPTOR: *ASSESSMENT; CASE STUDIES; *DATA COLLECTION; *EMPLOYEE SKILLS; ENGINEERING; GUIDELINES; *INVENTORIES; *PROGRAM DESCRIPTIONS; *STAFF QUALIFICATIONS; *SURVEYS

DESCRIPTIVE NOTE: 58-60P.

ABSTRACT: THIS ARTICLE DESCRIBES A METHOD TO UPDATE THE RECORDS ON EACH EMPLOYEE'S EDUCATIONAL BACKGROUND, WORKING SKILLS, AND PROJECT EXPERIENCE. THE PROGRAM, TITLED THE PERSONNEL QUALIFICATIONS INVENTORY (PQI), USES A DETAILED SURVEY FORM TO GATHER INFORMATION AND EVALUATE EMPLOYEES. GUIDELINES FOR USING THE METHOD ARE PROVIDED.

AVAILABILITY: CONSULTING ENGINEER V59 N2

IRIS ACCESSION NUMBER: EW008170

PUBLICATION DATE: AUG 82

TITLE: RESEARCH NEEDS IDENTIFIED: WPCF REPORTS CHART COURSE FOR FUTURE TOXICS, SLUDGE STUDIES.

DESCRIPTOR: ANALYTICAL TECHNIQUES; HAZARDOUS MATERIALS; MONITORING; *NEEDS ASSESSMENT; *OPERATIONS (WASTEWATER); *RESEARCH; *SLUDGE; *STATE-OF-THE-ART REVIEWS; *TOXIC SUBSTANCES; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1166-1169P.

ABSTRACT: THIS ARTICLE PRESENTS SUMMARIES OF TWO REPORTS BY THE WATER POLLUTION CONTROL FEDERATION ON RESEARCH NEEDS IN THE WASTEWATER TREATMENT FIELDS. THE FIRST REPORT SUMMARY EXAMINES TOXIC SUBSTANCES IN WASTEWATER TREATMENT SYSTEMS. THE SECOND ANALYZES RESEARCH NEEDS CONCERNING THE TREATMENT, USE, AND DISPOSAL OF WASTEWATER TREATMENT PLANT SLUDGES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008171

PUBLICATION DATE: AUG 82

TITLE: OPERATING EXPERIENCE WITH THERMOPHILIC ANAEROBIC DIGESTION.

PERSONAL AUTHOR: GARBER, WILLIAM F.

DESCRIPTOR: *ANAEROBIC DIGESTION; *CALIFORNIA; *CASE STUDIES; DESIGN; EQUIPMENT; FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *THERMOPHILIC; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1170-1175P.

ABSTRACT: OPERATION AT THE HYPERION TREATMENT PLANT (LOS ANGELES, CALIF.) OF UP TO 86 500 M-3 OF THERMOPHILIC DIGESTION CAPACITY FOR ALMOST 30 YEARS IS OUTLINED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008172

PUBLICATION DATE: AUG 82

TITLE: USE OF A KINETIC STUDY TO OPTIMIZE THE ACTIVATED SLUDGE PROCESS.

PERSONAL AUTHOR: VASICEK, PATRICK R.
DESCRIPTOR: *ACTIVATED SLUDGE; *CASE STUDIES; *KINETICS; *MATHEMATICAL MODELS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1176-1184P.

ABSTRACT: A CONTINUOUS-FLOW KINETIC STUDY WAS CONDUCTED WITH EFFLUENT FROM A PRIMARY CLARIFIER, WHICH WAS FED TO AN EXPERIMENTAL COMPLETE-MIXING ACTIVATED SLUDGE SYSTEM. CONSTANTS, WHEN SUBSTITUTED INTO THE PARENT KINETIC RELATIONSHIPS, SUGGESTED MANY PROCESS ADJUSTMENTS (ESPECIALLY WASTEWATER FEED MODES) THAT TEND TO STABILIZE SUSPENDED SOLIDS REMOVAL EFFICIENCY, WHILE MAINTAINING AN EXCELLENT BOD5 REMOVAL EFFICIENCY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008173

PUBLICATION DATE: AUG 82

TITLE: EFFECT OF LIQUID WASTEWATER SLUDGE APPLICATION ON CROP YIELD AND WATER QUALITY.

PERSONAL AUTHOR: DUNCOMB, D. R.; AND OTHERS

DESCRIPTOR: *AGRICULTURE; *CASE STUDIES; *LAND APPLICATION; *NUTRIENTS; RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 1185-1193P.

ABSTRACT: FOR 6 YEARS (1974 TO 1979, INCLUSIVE) LIQUID DIGESTED WASTEWATER SLUDGE WAS APPLIED TO A 16-HA TERRACED WATERSHED. MEAN CORN GRAIN YIELDS DURING THE 1976 TO 1979 PERIOD WERE 10.4 METRIC TONS/HA, AND MEAN YIELDS OF GRASS WERE 10.9 METRIC TONS/HA. CORN AND REED CANARYGRASS REMOVED 26 AND 34% OF THE SLUDGE-APPLIED NITROGEN (N), RESPECTIVELY, DURING THE 1976 TO 1979 PERIOD. UP TO 200 MG/1 OF SLUDGE-DERIVED N, IN THE FORM OF NITRATE (NO3), WAS DETECTED IN SOIL WATER SAMPLED AT THE 150-CM SOIL DEPTH FROM SLUDGE-TREATED AREAS IN CORN. LOWER AMOUNTS OF NO3 WERE FOUND IN SOIL WATER TAKEN FROM AREAS IN REED CANARYGRASS BECAUSE OF N VOLATILIZATION FROM SURFACE-APPLIED SLUDGE AND THE HIGHER N DEMANDS OF REED CANARYGRASS. NO SIGNIFICANT INCREASES IN P OR TRACE METAL CONCENTRATIONS WERE DETECTED IN PLANT TISSUE OR SOIL WATER SAMPLED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008174

PUBLICATION DATE: AUG 82

TITLE: EVALUATION AND COMPARISON OF DIGESTER GAS MIXING SYSTEMS.

PERSONAL AUTHOR: BAUMANN, PETER G.; HUIBREGTSE, GREGORY L.

DESCRIPTOR: *ANAEROBIC DIGESTION; *DIGESTERS; *DISSOLVED GASES; EQUIPMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1194-1206P.

ABSTRACT: STUDIES CONDUCTED UNDER CLEAR WATER AND ACTIVE ANAEROBIC DIGESTER CONDITIONS EVALUATED MIXING PERFORMANCE OF THREE GAS MIXING SYSTEMS-THE DRAFT TUBE, MULTIPLE SEQUENTIALLY DISCHARGED LANCES, AND FLOOR-MOUNTED DIFFUSER BOXES. THE CLEAN WATER STUDY EXAMINED MIXING INTENSITY AND PATTERNS AT VARIOUS GAS FLOW RATES, TANK DEPTHS, AND DISCHARGE SUBMERGENCES. WORK PERFORMED UNDER ACTIVE DIGESTER CONDITIONS CONSISTED OF SOLIDS CONCENTRATION PROFILES. RESULTS SHOWED DEPTH OF GAS DISCHARGE AND THE GAS FLOW RATE TO BE THE FACTORS CRITICAL TO SUCCESSFUL MIXING.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008175

PUBLICATION DATE: AUG 82

TITLE: FACTORS LIMITING EMULSIFIED LIPID TREATMENT CAPACITY OF ACTIVATED SLUDGE.

PERSONAL AUTHOR: HRUDEY, STEVE E.

DESCRIPTOR: *ACTIVATED SLUDGE; DESIGN; *EMULSION; *INDUSTRIAL WASTES; *LIPIDS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE TREATMENT; *WASTWATER TREATMENT

DESCRIPTIVE NOTE: 1207-1214P.

ABSTRACT: FACTORS POTENTIALLY LIMITING THE TREATABILITY OF EMULSIFIED LIPIDS BY ACTIVATED SLUDGE WERE EXPERIMENTALLY EVALUATED BY STUDYING THE RATE OF ADSORPTION OF LIPIDS ONTO MICROBIAL FLOC, THE EFFECT OF ADSORBED LIPIDS UPON ACTIVATED SLUDGE SETTLEABILITY, AND THE INTERACTION OF EMULSIFIED LIPIDS WITH STALKED CILIATED PROTOZOA. ADSORPTION STUDIES INDICATED THAT EMULSIFIED LIPIDS ARE RAPIDLY AND EFFICIENTLY LOW CONCENTRATIONS OF LIPIDS. SETTLEABILITY STUDIES INDICATED THAT EMULSIFIED LIPIDS MAY PROMOTE RATHER THAN HINDER ACTIVATED SLUDGE SETTLEABILITY. SIGNIFICANT CONSIDERATIONS FOR THE DESIGN AND OPERATION OF INDUSTRIAL ACTIVATED SLUDGE PLANTS FOLLOW FROM THESE FINDINGS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008176

PUBLICATION DATE: AUG 82

TITLE: COST-EFFECTIVE PROGRAM FOR COMBINED SEWER OVERFLOW ABATEMENT.

PERSONAL AUTHOR: GANLEY, ROBERT C.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *COLLECTION SYSTEMS; *COMBINED SEWERS; COMPUTER APPLICATIONS; *COST EFFECTIVENESS; EQUIPMENT; FACILITIES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *OVERFLOWS; *PLANNING; SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1215-1223P.

ABSTRACT: THIS PAPER PRESENTS THE APPROACH USED IN ASSESSING THE MAGNITUDE OF THE COMBINED SEWER OVERFLOW (CSO) PROBLEMS IN ONONDAGA COUNTY, N. Y., AND IN DEVELOPING AN IMPLEMENTABLE ABATEMENT PROGRAM THAT ALLOWS FOR STAGED EXECUTION OF PROGRAM ELEMENTS. SEWER SYSTEM MODELING USING THE COMPUTERIZED SWMM AND SIMPLIFIED SWMM MODELS WAS PERFORMED TO AID IN THE ANALYSIS OF COMPLEX INTERRELATIONSHIPS BETWEEN DRY WEATHER FLOW, STORM PATTERNS, RUNOFF RATES, AND SEWER SYSTEM CONSTRAINTS. A CONCLUSION REACHED IN THE COMPUTER SIMULATION OF THE EXISTING SEWER SYSTEM WAS THAT VARIOUS SYSTEM MODIFICATIONS OR IMPROVEMENTS HAD A SIGNIFICANT EFFECT ON THE REDUCTION OF CSO DISCHARGES. THESE MODIFICATIONS INCLUDE OVERFLOW DAM MODIFICATIONS, BACKWATER GATE INSTALLATIONS, REGULATOR PIPE CAPACITY INCREASES, INTERCEPTOR CLEANING, RELIEF SEWER CONTRUCTION, INTERCEPTOR REHABILITATION, IN-LINE GRIT CHAMBER CONSTRUCTION, AND MODIFICATIONS TO ALLOW CSO STORAGE IN THE EXISTING SEWER. THE CONCEPT OF CSO CONSOLIDATION AND TREATMENT IN DRAINAGE AREAS WAS DEVELOPED INTO A RECOMMENDED ABATEMENT MASTER PLAN.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008177

PUBLICATION DATE: AUG 82

TITLE: TREATMENT COSTS SAVINGS THROUGH MONTHLY VARIABLE EFFLUENT LIMITS.

PERSONAL AUTHOR: REHEIS, HAROLD F.; AND OTHERS

DESCRIPTOR: *COST EFFECTIVENESS; *COSTS; *EFFLUENTS; *FLOW MEASUREMENT; *GEORGIA; *MANAGEMENT; *MODELING; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *SEASONAL VARIATIONS; *STANDARDS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 1224-1230P.

ABSTRACT: SEASONALLY VARIABLE EFFLUENT LIMITS CAN PROVIDE SUBSTANTIAL COST SAVINGS FOR MUNICIPALITIES THAT MUST PROVIDE ADVANCED TREATMENT TO MEET WATER QUALITY STANDARDS. BY ESTIMATING THE 7-DAY, 10-YEAR MINIMUM STREAMFLOW (7Q10) FOR EACH MONTH OF THE YEAR, AND USING THESE VALUES WITH MONTHLY STREAM TEMPERATURES AND OTHER WATER QUALITY CHARACTERISTICS IN A DISSOLVED OXYGEN MODEL, ONE CAN DERIVE EFFLUENT LIMITS FOR TREATMENT FACILITIES THAT WILL MEET STREAM STANDARDS FOR EACH MONTH. THIS TECHNIQUE GIVES THE WASTE DISCHARGER MORE FLEXIBILITY THAN THE METHOD OF USING ONLY ONE MODEL RUN AT THE "ANNUAL" 7Q10. THIS TECHNIQUE ALSO MAKES IT POSSIBLE FOR MANY CITIES TO DISCHARGE AT SECONDARY TREATMENT FOR 4 OR 5 MONTHS OF THE YEAR, EVEN IF ADVANCED TREATMENT IS REQUIRED FOR OTHER MONTHS. CAPITAL COSTS ARE REDUCED; AND GEORGIA'S COMMUNITIES CAN SAVE AT LEAST 5% PER YEAR IN O & M COSTS BY ADAPTING TREATMENT TO SEASONAL VARIATIONS INSTEAD OF USING A FIXED LEVEL OF ADVANCED TREATMENT YEAR-ROUND.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008178

PUBLICATION DATE: AUG 82

TITLE: INACCURACY OF THE PREINCUBATION MODIFIED M-FC METHOD FOR ESTIMATING FECAL COLIFORM DENSITIES IN MARINE WATERS.

PERSONAL AUTHOR: CABELLI, VICTOR J.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC ENVIRONMENTS; *BACTERIA; *COLIFORMS; *FECAL COLIFORMS; *LABORATORY PROCEDURES; *MARINE ENVIRONMENTS; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 1237-1240P.

ABSTRACT: TWO METHODS WERE COMPARED FOR ESTIMATING "FECAL COLIFORM" DENSITIES IN COASTAL AND ESTUARINE WATER SAMPLES. IN GENERAL, THOSE ESTIMATES OBTAINED BY EITHER THE STANDARD OR THE PREINCUBATION (2 HOURS AT 35-DEGREES C) MODIFIED M-FC PROCEDURE (MM-FC) WERE APPRECIABLY AND SIGNIFICANTLY LESS (P>99%, IN MOST INSTANCES) THAN THOSE OBTAINED AS A BY-PRODUCT OF THE MTEC METHOD FOR E. COLI. MOREOVER, THE CONFIRMATION FREQUENCY BY THE LATTER PROCEDURE EXCEEDED 95%.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N8

IRIS ACCESSION NUMBER: EW008179

PUBLICATION DATE: AUG 82

TITLE: REDUCING THE FORMATION OF TRIHALOMETHANES.

PERSONAL AUTHOR: SINGH, IQBAL; MCTIGHE, THOMAS C.

DESCRIPTOR: *CASE STUDIES; *CHLORINATION; *DRINKING WATER; *DISINFECTION; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *THM; *TRIHALOMETHANES; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 45-49P.

ABSTRACT: THM FORMATION WAS REDUCED BY A CHANGE IN POINT OF CHLORINE FEED DURING A YEAR-LONG STUDY IN MONROE COUNTY, NEW YORK.

AVAILABILITY: PUBLIC WORKS V113 N8

IRIS ACCESSION NUMBER: EW008180

PUBLICATION DATE: AUG 82

TITLE: WASTEWATER PLANT OPERATION AND MAINTENANCE MANUALS.

PERSONAL AUTHOR: METCALF, RICHARD R.

DESCRIPTOR: *INSTRUCTION; *INSTRUCTIONAL MATERIALS; *MANUALS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *POST SECONDARY EDUCATION; *PUBLICATIONS; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 50P.

ABSTRACT: O AND M MANUALS HAVE MANY FAULTS. SUGGESTIONS FOR IMPROVEMENT ARE OFFERED TO THE PROJECT OWNER, THE DESIGNER, AND THE REGULATOR.

AVAILABILITY: PUBLIC WORKS V113 N8

IRIS ACCESSION NUMBER: EW008181

PUBLICATION DATE: AUG 82

TITLE: A COMPOSTING SOLUTION TO A SLUDGE DISPOSAL PROBLEM.

PERSONAL AUTHOR: EPSTEIN, ELIOT; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *COMPOSTING; *CONNECTICUT; *COSTS; *ECONOMICS; *LAND APPLICATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 56-59P.

ABSTRACT: A SHORTAGE OF LAND APPLICATION SITES LED A CITY TO A STUDY OF COMPOSTING COSTS AND BENEFITS.

AVAILABILITY: PUBLIC WORKS V113 N8

IRIS ACCESSION NUMBER: EW008182

PUBLICATION DATE: AUG 82

TITLE: WASTEWATER TREATMENT IN SCANDINAVIA.

PERSONAL AUTHOR: SKODJE, MARVIN T.

DESCRIPTOR: *FACILITIES; *GOVERNMENT ROLE; *MANAGEMENT; *NORWAY; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SCANDINAVIA; *SWEDEN; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 64-65P.

ABSTRACT: PRESENTED ARE OBSERVATIONS ON THE TECHNOLOGY, ENVIRONMENTAL CONCERNS, AND TREATMENT PHILOSOPHIES IN SWEDEN AND NORWAY.

AVAILABILITY: PUBLIC WORKS V113 N8

IRIS ACCESSION NUMBER: EW008183

PUBLICATION DATE: AUG 82

TITLE: NATURAL GAS PROVES TO BE ECONOMICAL FOR PUMPING WATER.

PERSONAL AUTHOR: NAGLER, BRUCE E.

DESCRIPTOR: *CASE STUDIES; *DRINKING WATER; *COSTS; *ECONOMICS; *ENERGY CONSERVATION; *MASSACHUSETTS; *NATURAL GAS; *PUMPING; *WATER DISTRIBUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 68-69P.

ABSTRACT: PRESENTED IS A REPORT OF FIVE YEARS OF EXPERIENCE ON THE USE OF NATURAL GAS AS AN ENERGY SOURCE FOR PUMPING WATER IN MASSACHUSETTS.

AVAILABILITY: PUBLIC WORKS V113 N8

IRIS ACCESSION NUMBER: EW008184

PUBLICATION DATE: AUG 82

TITLE: TRAINING EVALUATION: WHAT'S THE CURRENT STATUS?

PERSONAL AUTHOR: BRANDENBURG, DALE C.

DESCRIPTOR: *DATA COLLECTION; *EVALUATION; *FEEDBACK; *GOALS; *PERFORMANCE EVALUATION; *RESEARCH METHODOLOGY; *RESEARCH REPORTS; *SURVEYS; *TRAINING

DESCRIPTIVE NOTE: 14-19P.

ABSTRACT: EVIDENCE SHOWS THAT EVALUATION PRACTICE IS LIMITED TO DIRECT SUPPORT WITHIN TRAINING: LITTLE INTERACTION TAKES PLACE WITH OTHER ORGANIZATIONS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL V36 N8

IRIS ACCESSION NUMBER: EW008185

PUBLICATION DATE: AUG 82

TITLE: PRACTICAL STRATEGIES FOR EVALUATING TRAINING.

PERSONAL AUTHOR: SALINGER, RUTH D.; DEMING, BASIL S.

DESCRIPTOR: COST BENEFIT; *EVALUATION; *LEARNING;

*PERFORMANCE EVALUATION; *TRAINING; *TRANSFER OF LEARNING
DESCRIPTIVE NOTE: 20-29P.

ABSTRACT: THIS ARTICLE PRESENTS PRACTICAL STRATEGIES FOR EVALUATING TRAINING. A NUMBER OF QUESTIONS ARE RAISED REGARDING TRAINING OUTCOMES AND STRATEGIES TO ANSWER THESE QUESTIONS ARE GIVEN. PRIMARY CONSIDERATION IS GIVEN TO LEARNING, TRANSFER OF LEARNING, AND COST-BENEFIT.

AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL V36 N8

IRIS ACCESSION NUMBER: EW008186

PUBLICATION DATE: AUG 82

TITLE: COLLECTING TRAINING COST DATA.

PERSONAL AUTHOR: WEINSTEIN, LAURENCE M.

DESCRIPTOR: *COSTS; *COST BENEFIT; *COST EFFECTIVENESS; *RECORD KEEPING; *TRAINING

DESCRIPTIVE NOTE: 30-34P.

ABSTRACT: TABULATING AND PRESENTING TRAINING COST DATA WILL FACILITATE EVALUATION OF PROGRAMS AND ANALYSIS OF TRAINING COST-EFFECTIVENESS.

AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL V36 N8

IRIS ACCESSION NUMBER: EW008187

PUBLICATION DATE: AUG 82

TITLE: EVALUATING MANAGEMENT TRAINING: A CONTINGENCY APPROACH.

PERSONAL AUTHOR: CLEMENT, RONALD W.; ARANDA, EILEEN K.

DESCRIPTOR: *GOALS; *EVALUATION; MANAGEMENT; *MANAGEMENT TRAINING; *ORGANIZATIONAL SETTING; *ORGANIZATIONAL PROBLEMS; *PERFORMANCE EVALUATION; *TRAINING

DESCRIPTIVE NOTE: 39-43P.

ABSTRACT: MANAGEMENT TRAINING EVALUATION SHOULD INCLUDE "CONTINGENCY" VARIABLES--THE ORGANIZATIONAL SETTING, THE MANAGER'S CHARACTERISTICS, AND THE NATURE OF THE ORGANIZATIONAL PROBLEM.

AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL V36 N8

IRIS ACCESSION NUMBER: EW008188

PUBLICATION DATE: AUG 82

TITLE: A SYSTEMATIC APPROACH TO EVALUATION.

PERSONAL AUTHOR: BAKKEN, DAVID; BERNSTEIN, ALAN L.
DESCRIPTOR: *EVALUATION; *GOALS; *LEARNING; *LEARNING OUTCOMES; *PERFORMANCE EVALUATION; *TRAINING

DESCRIPTIVE NOTE: 44-51P.

ABSTRACT: AS COMPANIES DEVOTE MORE RESOURCES TO TRAINING, THE NEED FOR VALID INFORMATION ABOUT THE "RETURN ON INVESTMENT" INCREASES. THIS ARTICLE PROVIDES SUGGESTIONS FOR ASSESSING TRAINING GOALS AND OUTCOMES.

AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL V36 N8

IRIS ACCESSION NUMBER: EW008189

PUBLICATION DATE: AUG 82

TITLE: HOW TO TACKLE TRAINING FOR TELECONFERENCE USERS.

PERSONAL AUTHOR: BAIRD, MARCIA; MONSON, MAVIS

DESCRIPTOR: *AUDIOVISUAL AIDS; *COMMUNICATIONS; *EDUCATIONAL NEEDS; *GUIDELINES; *INSTRUCTIONAL MATERIALS; *INSTRUCTION; *TECHNOLOGICAL ADVANCEMENTS; *TELECOMMUNICATIONS; *TELECONFERENCING; *TRAINING PROGRAMS; VIDEOCONFERENCING

DESCRIPTIVE NOTE: 45-50P.

ABSTRACT: THIS ARTICLE PROVIDES INSIGHT INTO THE TRAINING OF NEW USERS OF TELECONFERENCING, THE NEED FOR TRAINING, AND HOW TO PROVIDE TRAINING. THE EMPHASIS IS ON THE DEVELOPMENT AND IMPLEMENTATION OF A WELL DESIGNED TRAINING PROGRAM THAT PROVIDES AN OPPORTUNITY FOR INDIVIDUALS TO DEAL WITH THE CHANGES IN ATTITUDES AND BEHAVIOR THAT MUST BE DEVELOPED FOR THE ADOPTION OF NEW TECHNOLOGIES SUCH AS TELECONFERENCING.

AVAILABILITY: EDUCATIONAL & INDUSTRIAL TELEVISION V14 N8

IRIS ACCESSION NUMBER: EW008190

PUBLICATION DATE: 82

TITLE: LAND AND WATER ISSUES RELATED TO ENERGY DEVELOPMENT.

PERSONAL AUTHOR: RAND, PATRICIA J.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *ASSESSMENT; BIOLOGICAL SCIENCES; *CONFERENCE PROCEEDINGS; *ECOLOGICAL FACTORS; *ENERGY DEVELOPMENT; *ENVIRONMENTAL IMPACT; *LAND USE; *MANAGEMENT; NATURAL RESOURCES; *RESEARCH REPORTS; WATER PROJECTS; *WATER RESOURCES

DESCRIPTIVE NOTE: 469P. PRICE: $39.95

ABSTRACT: PAPERS PRESENTED AT THE SYMPOSIUM ON LAND AND WATER ISSUES RELATED TO ENERGY DEVELOPMENT ARE GROUPED IN THIS PROCEEDINGS INTO TWO MAIN SECTIONS. SECTION I PRIMARILY ADDRESSES METHODS, FROM THE GENERAL TO THE SPECIFIC. IT

INCLUDES CONFLICT RESOLUTION, TECHNIQUES FOR STUDYING INDIVIDUAL COMPONENTS, AND ASSESSMENT OF TOTAL ECOSYSTEMS FOR MANAGEMENT PURPOSES. SECTION II DESCRIBES SOME EFFECTS OF THE ENERGY INDUSTRY ON THE ENVIRONMENT. INCLUDED ARE THE EFFECTS OF OIL ON AQUATIC ORGANISMS, THE EFFECTS OF AMMONIA ON AQUATIC SYSTEMS, AND THE EFFECTS OF BRINE ON PLANTS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008191

PUBLICATION DATE: 80

TITLE: QUANTITATIVE ANALYSIS FOR PUBLIC POLICY.

PERSONAL AUTHOR: COHAGAN, JOHN KENNETH

DESCRIPTOR: *ANALYTICAL TECHNIQUES; COST EFFECTIVENESS; *DATA ANALYSIS; *DECISION-MAKING; ECONOMIC FACTORS; *INSTRUCTIONAL MATERIALS; POLICY FORMATION; *POST SECONDARY EDUCATION; *PUBLIC HEALTH; *PUBLIC POLICY; QUANTITATIVE ANALYSIS; *STATISTICS; *TEXTBOOKS

DESCRIPTIVE NOTE: 456P.

ABSTRACT: THIS TEXTBOOK PRESENTS ESSENTIAL CONCEPTS AND TECHNIQUES OF QUANTITATIVE ANALYSIS, WITH SPECIAL ATTENTION TO PUBLIC SECTOR APPLICATIONS IN AREAS SUCH AS HEALTH CARE, PUBLIC HEALTH, AND PUBLIC WORKS. ALL THEORY AND PROCEDURES OF QUANTITATIVE METHODS ARE DEVELOPED AND ILLUSTRATED. A BROAD RANGE OF TOPICS IS COVERED, INCLUDING PROBABILISTIC REASONING, DATA ANALYSIS, RESOURCE ALLOCATION WITH LINEAR PROGRAMMING, AND FORMAL DECISION ANALYSIS.

AVAILABILITY: MCGRAW-HILL BOOK COMPANY, MIDCONTINENT DISTRIBUTORS CENTERS, MANCHESTER ROAD, MANCHESTER, MO 63011

IRIS ACCESSION NUMBER: EW008192

PUBLICATION DATE: MAY 82

TITLE: ENVIRONMENTAL PROTECTION: AGENDA FOR THE 1980'S.

DESCRIPTOR: *AIR QUALITY; CONSTRUCTION GRANTS; ECONOMIC FACTORS; ENVIRONMENTAL IMPACT STATEMENTS; *ENVIRONMENTAL PROTECTION; *ENVIRONMENTAL QUALITY; *FEDERAL GOVERNMENT; HAZARDOUS MATERIALS; *MANAGEMENT; PESTICIDES; *POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; PUBLIC HEALTH; SOLID WASTES; *WATER QUALITY

DESCRIPTIVE NOTE: 39P.

ABSTRACT: THIS STUDY EXAMINES CURRENT AND EMERGING ISSUES RELATING TO FEDERAL GOVERNMENT INVOLVEMENT IN ENVIRONMENTAL PROTECTION ACTIVITIES AND DISCUSSES THE PERSPECTIVE USED IN ORGANIZING GENERAL ACCOUNTING OFFICE AUDIT EFFORTS. TOPICS ADDRESSED INCLUDE: HAZARDOUS WASTES, SOLID WASTES, WATER POLLUTION CONTROL, CONSTRUCTION GRANTS PROGRAM, CLEAN AIR ACT, PESTICIDES, ENVIRONMENTAL IMPACT STATEMENTS, AND THE BALANCE OF ENVIRONMENTAL PROTECTION WITH OTHER NATIONAL CONCERNS.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW008193

PUBLICATION DATE: MAY 82

TITLE: WATER ISSUES FACING THE NATION: AN OVERVIEW.

DESCRIPTOR: *ECONOMIC FACTORS; *FEDERAL GOVERNMENT; *MANAGEMENT; *NEEDS; *NATURAL RESOURCES; PUBLIC HEALTH; *RESEARCH; *RESEARCH REPORTS; *WATER PROJECTS; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 30P.

ABSTRACT: THIS STUDY DISCUSSES ISSUES AND PROBLEMS INVOLVING WATER RESOURCES IN THE UNITED STATES AND THE PERSPECTIVE USED BY THE GENERAL ACCOUNTING OFFICE IN ORGANIZING ITS RELATED AUDIT EFFORTS. THE STUDY CONCLUDES THAT THE NATION NOW FACES A DILEMMA IN ENSURING ADEQUATE SUPPLIES OF FRESH WATER IN THE FACE OF DETERIORATING FACILITIES, INFLATING COSTS, AND DECREASING BUDGETS.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW008194

PUBLICATION DATE: JUL 81

TITLE: VIRUS INACTIVATION IN WASTEWATER EFFLUENTS BY CHLORINE, OZONE, AND ULTRAVIOLET LIGHT.

PERSONAL AUTHOR: FLUEGGE, R. A.; AND OTHERS

DESCRIPTOR: *CHLORINE; *DISINFECTION; EFFLUENTS; *OZONE; *PATHOGENS; *PERFORMANCE EVALUATION; PUBLIC HEALTH; *RESEARCH REPORTS; ULTRAVIOLET LIGHT; *VIRUSES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-208183; EPA-600/S2-81-088

ABSTRACT: VIRUS LEVELS BEFORE AND AFTER DISINFECTION WERE STUDIED IN FOUR FULL-SCALE WASTEWATER TREATMENT PLANTS: TWO USED CHLORINE AS THE DISINFECTANT, ONE USED OZONE, AND ONE USED ULTRAVIOLET LIGHT. A SECOND OZONE STUDY WAS CONDUCTED ON A PILOT SCALE AT ONE OF THE TREATMENT PLANTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008195
PUBLICATION DATE: JUL 81

TITLE: FEASIBILITY STUDY OF OPEN TANK OXYGEN ACTIVATED SLUDGE WASTEWATER TREATMENT.

PERSONAL AUTHOR: RAKNESS, KERWIN R.

DESCRIPTOR: *ACTIVATED SLUDGE; *CASE STUDIES; MUNICIPAL WASTES; *OPEN TANK SYSTEM; *OXYGEN-ACTIVATED SLUDGE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; SLUDGE; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-213274; EPA-600/S2-81-095

ABSTRACT: THE PILOT PLANT FOR THIS STUDY CONSISTED OF ONE OXYGENATION BASIN AND TWO CLARIFIERS CAPABLE OF TREATING 151 L/MIN (40 GPM). THE SYSTEM TREATED PRIMARY EFFLUENT FROM THE ENGLEWOOD, COLORADO, MUNICIPAL WASTEWATER TREATMENT FACILITY. ANALYSIS OF PILOT PLANT OPERATIONS INDICATED THAT SOMEWHAT LESS SLUDGE WAS PRODUCED WITH THE OXYGEN SYSTEM WHEN COMPARED WITH LITERATURE-CITED, TYPICAL AIR SLUDGE PRODUCTION. THIS DECREASED SLUDGE PRODUCTION OCCURRED AND BECAME MORE PRONOUNCED AT HIGHER ORGANIC LOADINGS. COMPARISONS WERE MADE BETWEEN LITERATURE-CITED, TYPICAL AIR-SLUDGE AND OXYGEN-SLUDGE SETTLING CHARACTERISTICS. IN ALL CASES, THE OXYGEN-SLUDGE INITIAL SETTLING VELOCITY WAS GREATER THAN TYPICAL AIR SLUDGE AT GIVEN TSS CONCENTRATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008196

PUBLICATION DATE: SEP 81

TITLE: LABORATORY STUDIES OF PRIORITY POLLUTANT TREATABILITY.

PERSONAL AUTHOR: SLITH, JAMES K.; AND OTHERS

DESCRIPTOR: CARBON ADSORPTION; COSTS; *INDUSTRIAL WASTES; *LABORATORY STUDIES; *PERFORMANCE EVALUATION; POLLUTANTS; *PRIORITY POLLUTANTS; *RESEARCH REPORTS; RESIN ADSORPTION; STEAM STRIPPING; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-231235; EPA-600/S2-81-129

ABSTRACT: THIS REPORT DESCRIBES A SCREENING INVESTIGATION OF SEVERAL METHODS CURRENTLY AVAILABLE FOR REMOVAL OF PRIORITY POLLUTANTS FROM INDUSTRIAL PLANT WASTEWATERS. A SAMPLE FROM AN ACTUAL INDUSTRIAL STREAM WAS USED FOR LABORATORY BENCH SCALE TREATMENT TESTS ON FIVE PRIORITY POLLUTANTS PRESENT AT SIGNIFICANT CONCENTRATIONS. RESULTS ARE OF INTEREST IN EVALUATING BEST AVAILABLE TECHNOLOGY FOR REMOVAL OF PRIORITY POLLUTANTS AND WILL BE HELPFUL TO THOSE PLANNING FURTHER RESEARCH INCLUDING DEMONSTRATION UNITS FOR TREATING SIMILAR WASTES. THE STUDY FOCUSED ON CARBON ADSORPTION, RESIN ADSORPTION AND STEAM STRIPPING TECHNOLOGIES AND DEVELOPED ORDER-OF-MAGNITUDE COST RELATIONSHIPS FOR EACH TECHNOLOGY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 528
PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008197

PUBLICATION DATE: AUG 81

TITLE: USING COHERENT WATER JETS TO CONTROL OIL SPILLS.

PERSONAL AUTHOR: BRESLIN, MICHAEL K.

DESCRIPTOR: *CASE STUDIES; *EQUIPMENT; *OIL SPILLS; *PERFORMANCE EVALUATION; *POLLUTION CONTROL; *RESEARCH REPORTS; *SPILL CLEAN-UP; *WATER JETS; *WATER QUALITY

DESCRIPTIVE NOTE: PB81-232720; EPA-600/S2-81-141

ABSTRACT: THE ABILITY OF COHERENT WATER STREAMS TO INDUCE A SURFACE CURRENT IN A BODY OF WATER AND THUS CONTROL A FLOATING OIL SLICK WAS EXAMINED IN A NUMBER OF TEST PROGRAMS CONDUCTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S (USEPA) OIL AND HAZARDOUS MATERIALS SIMULATED ENVIRONMENTAL TEST TANK (OHMSETT). THE OBJECTIVE OF THE TESTS WAS TO DETERMINE WHETHER COHERENT WATER STREAMS COULD SERVE AS AN ALTERNATIVE TO FABRIC BOOMS AND WATER SPRAYS IN CONCENTRATING, DIVERTING, AND CONTAINING OIL SLICKS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008198

PUBLICATION DATE: SEP 81

TITLE: REMOVAL OF HEAVY METALS AND SUSPENDED SOLIDS FROM BATTERY WASTEWATERS: APPLICATION OF HYDROPERM CROSS-FLOW MICROFILTRATION.

PERSONAL AUTHOR: SHAPIRO, NORMAN I.; AND OTHERS

DESCRIPTOR: *EQUIPMENT; *FILTRATION; *HEAVY METALS; *HYDROPERM; INDUSTRIAL WASTES; *LEAD-ACID WASTES; MICROFILTERS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SUSPENDED SOLIDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-234833; EPA-600/S2-81-147

ABSTRACT: LABORATORY AND FULL-SCALE FIELD DEMONSTRATIONS WERE CONDUCTED TO DEMONSTRATE THE APPLICABILITY OF THE HYDROPERM CROSS-FLOW MICROFILTRATION SYSTEM FOR THE REMOVAL OF SUSPENDED SOLIDS, AND FOR THE REMOVAL OF SUSPENDED TOXIC HEAVY METALS FROM LEAD-ACID BATTERY PRODUCTION WASTEWATERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008199
PUBLICATION DATE: SEP 81

TITLE: NITROGEN AND PHOSPHOROUS REACTIONS IN OVERLAND FLOW OF WASTEWATER.

PERSONAL AUTHOR: KHALID, R. A.; AND OTHERS

DESCRIPTOR: BIOCHEMISTRY; *CASE STUDIES; *NITROGEN; NUTRIENTS; *OVERLAND FLOW; *PHOSPHOROUS; *RESEARCH REPORTS; SOIL STUDIES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-239311; EPA-600/S2-81-150

ABSTRACT: BIOCHEMICAL TRANSFORMATIONS OF LABELLED AMMONIUM-NITROGEN RESULTING FROM THE OVERLAND FLOW TREATMENT OF SIMULATED WASTEWATER WERE STUDIED IN SMALL SCALE TEST MODELS ESTABLISHED WITH VEGETATED SOILS. RESEARCH OBJECTIVES INCLUDED: (1) EVALUATE THE ROLE OF NITRIFICATION-DENITRIFICATION REACTIONS, AMMONIA VOLATILIZATION, PLANT UPTAKE AND IMMOBILIZATION IN NITROGEN REMOVAL (2) MEASURE THE EFFECTS OF CONTROLLED OXIDATION-REDUCTION CONDITIONS AND PH CHANGES ON PHOSPHOROUS SORPTION AND MOBILITY, AND (3) DETERMINE THE EFFECTS OF PREREDUCED SOIL CONDITIONS AND LIME APPLICATION ON THE EFFICIENCY OF SOIL-PLANT SYSTEMS IN THE REMOVAL OF PHOSPHOROUS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008200

PUBLICATION DATE: SEP 81

TITLE: PARALLEL EVALUATION OF AIR- AND OXYGEN-ACTIVATED SLUDGE.

PERSONAL AUTHOR: AUSTIN, SCOTT; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; AIR-ACTIVATED SLUDGE; DESIGN; EQUIPMENT; OXYGEN-ACTIVATED SLUDGE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-246712; EPA-600/S2-81-155

ABSTRACT: TO PROVIDE DATA ON THE RELATIVE MERITS OF AIR AND OF OXYGEN IN THE ACTIVATED SLUDGE PROCESS, TWO 1,900-M3/DAY (0.5-MGD) ACTIVATED SLUDGE PILOT PLANTS, ONE AIR AND ONE OXYGEN SYSTEM, WERE OPERATED SIDE-BY-SIDE AT THE JOINT WATER POLLUTION CONTROL PLANT, CARSON, CALIFORNIA. THE PRIMARY PURPOSE OF THE STUDY WAS TO OBTAIN DATA PERTINENT TO THE SELECTION AND DESIGN OF AN ACTIVATED SLUDGE SYSTEM AT THE JWPCP, BUT THE NATURE OF THE RESEARCH FACILITIES ALLOWED A DIRECT COMPARISON OF THE TWO ACTIVATED SLUDGE PROCESSES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008201
PUBLICATION DATE: OCT 81

TITLE: PARASITES IN SOUTHERN SLUDGES AND DISINFECTION BY STANDARD SLUDGE TREATMENT.

PERSONAL AUTHOR: REIMERS, R. S.; AND OTHERS

DESCRIPTOR: BIOLOGY; *DISINFECTION; MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *PARASITES; *PATHOGENS; PUBLIC HEALTH; *RESEARCH REPORTS; SLUDGE; *SLUDGE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-102344; EPA-600/S2-81-166

ABSTRACT: THE OBJECTIVES OF THIS STUDY WERE TO (1) ASSESS THE PRESENCE AND DENSITIES OF RESISTANT STAGES OF PARASITES IN MUNICIPAL WASTEWATER SLUDGES (SEWAGE) IN THE SOUTHERN UNITED STATES, (2) INVESTIGATE PARASITE INACTIVATION BY LIME TREATMENT OF SLUDGES SEEDED WITH INTESTINAL PARASITES, (3) MEASURE THE MASS BALANCE OF HELMINTH EGGS THROUGH VARIOUS PROCESSES IN A MUNICIPAL WASTEWATER TREATMENT PLANT, AND (4) ASSESS, ON THE BASIS OF LABORATORY AND FIELD DATA, STANDARD SEWAGE SLUDGE TREATMENT PROCESSES FOR THEIR EFFECTIVENESS IN INACTIVATING PARASITES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008202

PUBLICATION DATE: OCT 81

TITLE: DEMONSTRATION PHYSICAL CHEMICAL SEWAGE TREATMENT PLANT UTILIZING BIOLOGICAL NITRIFICATION.

PERSONAL AUTHOR: KREISSAL, JAMES F.; LEWIS, RONALD F.

DESCRIPTOR: *BIOLOGICAL TREATMENT; CONSTRUCTION; *DESIGN; EQUIPMENT; FACILITIES; NITRIFICATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PHYSICAL-CHEMICAL TREATMENT; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-101643; EPA-600/S2-81-173

ABSTRACT: THIS STUDY INVOLVED THE DESIGN, CONSTRUCTION AND OPERATION OF A HYBRID PHYSICAL-CHEMICAL (P-C) BIOLOGICAL TREATMENT FACILITY. EVALUATION OF THIS SYSTEM WAS BASED ON TWO FACTORS: ITS UTILITY AS A TRANSPORTABLE FACILITY FOR INTERIM HIGH QUALITY TREATMENT OF WASTEWATERS AT DIFFERENT LOCATIONS AND ITS VALUE AS A TREATMENT CONCEPT TO INCORPORATE THE BEST ATTRIBUTES OF BOTH METHODS (P-C AND BIOLOGICAL) OF TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008203

PUBLICATION DATE: OCT 81

TITLE: REVEGETATING STRIP-MINED LAND WITH MUNICIPAL SEWAGE SLUDGE.

PERSONAL AUTHOR: SOPPER, WILLIAM E.; KERR, SONJA N.

DESCRIPTOR: *CASE STUDIES; *LAND APPLICATION; *LAND RECLAMATION; *MUNICIPAL WASTES; *PERFORMANCE EVALUATION; *RECLAMATION; *RESEARCH REPORTS; REVEGETATION; *SEWAGE SLUDGE; *SLUDGE DISPOSAL; *STRIP MINES; *WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-102484; EPA-600/S2-81-182

ABSTRACT: THE USE OF MUNICIPAL SLUDGE TO REVEGETATE MINED LAND IN AN ENVIRONMENTALLY ACCEPTABLE MANNER WAS DEMONSTRATED ON SEVERAL PLOTS IN THE ANTHRACITE AND BITUMINOUS COAL MINING REGIONS OF PENNSYLVANIA. THREE SITES REPRESENTATIVE OF ABANDONED, BARREN BITUMINOUS AND ANTHRACITE MINES WERE TREATED WITH VARIOUS TYPES OF MUNICIPAL SLUDGE AT HIGH AND LOW APPLICATION RATES AND BROADCAST SEEDED WITH A MIXTURE OF GRASSES AND LEGUMES. A MONITORING SYSTEM WAS INSTALLED AT EACH DEMONSTRATION SITE TO DETERMINE THE EFFECTS OF THE SLUDGE APPLICATION ON THE CHEMICAL AND BACTERIOLOGICAL QUALITY OF GROUNDWATER AND SOIL PERCOLATE WATER, CHEMICAL PROPERTIES OF THE SOIL, AND QUALITY AND GROWTH OF VEGETATIVE COVER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008204

PUBLICATION DATE: OCT 81

TITLE: REMOVAL OF WATER SOLUBLE HAZARDOUS MATERIALS SPILLS FROM WATERWAYS BY ACTIVATED CARBON.

PERSONAL AUTHOR: SCHNEIDER, GEORGE R.

DESCRIPTOR: *ACTIVATED CARBON; *EQUIPMENT; *HAZARDOUS MATERIALS; *MODELS; ORGANIC COMPOUNDS; *PERFORMANCE EVALUATION; *POLLUTION CONTROL; *RESEARCH REPORTS; *RIVERS; *SPILLS; TOXIC SUBSTANCES; WASTE SPILLS; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-103813; EPA-600/S2-81-195

ABSTRACT: A MODEL FOR REMOVING WATER SOLUBLE ORGANIC MATERIALS FROM WATER BY CARBON-FILLED, BUOYANT PACKETS AND PANELS IS DESCRIBED. BASED ON THIS MODEL, EQUATIONS ARE DERIVED FOR REMOVING DISSOLVED ORGANIC COMPOUNDS FROM WATERWAYS BY BUOYANT PACKETS THAT ARE EITHER (A) CYCLED THROUGH A WATER COLUMN, OR (B) SUSPENDED IN THE WATERWAY BY NATURAL TURBULENCE AND BY PANELS MECHANICALLY SUSPENDED IN WATERWAYS. COMPUTED RESULTS ARE GIVEN FOR PHENOL SPILLS. THE REPORT CONSIDERS THE EFFECTS OF TURBULENCE ON THE SUSPENSION OF BUOYANT PACKETS; IT ALSO EXAMINES HOW TURBULENT MIXING AND LONGITUDINAL DISPERSION OF SPILLS IN WATERWAYS AFFECT THE REMOVAL OF WATER SOLUBLE HAZARDOUS MATERIALS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008205

PUBLICATION DATE: OCT 81

TITLE: FEASIBILITY OF COMMERCIALIZED WATER TREATMENT TECHNIQUES FOR CONCENTRATED WASTE SPILLS.

PERSONAL AUTHOR: GHASSEMI, M.; AND OTHERS

DESCRIPTOR: *CONTAMINATION; COSTS; *ECONOMIC FACTORS; *HAZARDOUS SUBSTANCES; *ONSITE TREATMENT; *PERFORMANCE EVALUATION; *POLLUTION CONTROL; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTE SPILLS; *WATER TREATMENT

DESCRIPTIVE NOTE: PB82-108440; EPA-600/S2-81-213

ABSTRACT: THE SUITABILITY AND ECONOMICS OF USING COMMERCIAL WATER TREATMENT TECHNIQUES FOR ONSITE TREATMENT OF CONCENTRATED WASTES WERE EVALUATED. THE TECHNIQUES INCLUDED REVERSE OSMOSIS, ULTRAFILTRATION, ION EXCHANGE, WET-AIR OXIDATION, HIGH-PURITY OXYGEN-ACTIVATED SLUDGE PROCESS, ULTRAVIOLET-OZONE OXIDATION, AND COAGULATION/PRECIPITATION. DATA FROM THE PUBLISHED LITERATURE AND THOSE OBTAINED FROM PROCESS SUPPLIERS PROVIDED THE BASIS FOR THE EVALUATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008207

PUBLICATION DATE: AUG 81

TITLE: WATER QUALITY AND MANGROVE ECOSYSTEM DYNAMICS.

PERSONAL AUTHOR: SNEDAKER, SAMUEL C.; BROWN, MELVIN S.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *COASTAL AREAS; *ECOLOGICAL FACTORS; ECOSYSTEM DYNAMICS; *ECOSYSTEMS; *MANGROVE ECOSYSTEMS; POLLUTANTS; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: PB81-204109; EPA-600/S4-81-022

ABSTRACT: THE PURPOSES OF THIS PROJECT WERE TO DEFINE THE EMPIRICAL RELATIONSHIP THAT EXISTS BETWEEN WATER QUALITY AND MANGROVE ECOSYSTEM DYNAMICS, AND TO EVALUATE THAT RELATIONSHIP AS A TWO-WAY INTERACTION. THIS REPORT DESCRIBES KEY MECHANISMS THAT PERMIT DEVELOPMENT OF THE MANGROVE ECOSYSTEM IN CERTAIN COASTAL AREAS AND CONSIDERS FLOW VARIABLES OF POLLUTANTS ENTRAINED IN WATER CIRCULATING WITHIN THE FOREST.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008208

PUBLICATION DATE: DEC 81

TITLE: DETERMINATION OF HALOETHERS IN INDUSTRIAL AND MUNICIPAL WASTEWATERS.

PERSONAL AUTHOR: SHERMAN, PAUL L.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *HALOETHERS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *RESEARCH REPORTS; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-223390; EPA-600/S4-81-062

ABSTRACT: THIS DOCUMENT DESCRIBES AN ANALYTICAL METHOD, NOT BASED ON GAS CHROMATOGRAPHY/MASS SPECTROMETRY, FOR THE ANALYSIS OF HALOETHERS IN WATER AND WASTERWATER. THE FOLLOWING HALOETHERS WERE ORIGINALLY INCLUDED IN THIS STUDY: 2-CHLOROETHYL VINYL ETHER, BIS(2-CHLOROISOPROPYL) ETHER, BIS(2-CHLOROETHYL) ETHER, BIS(2-CHLOROETHOXY) METHANE, 4-CHLOROPHENYL PHENYL ETHER, 4-BROMOPHENYL PHENYL ETHER, AND (BISCHLOROMETHYL) ETHER. THE 2-CHLOROETHYL VINYL ETHER AND THE BIS(CHLOROMETHYL) ETHER WERE LATER DELETED FROM THE PROJECT BECAUSE OF EXTREME VOLATILITY AND HYDROLYTIC INSTABILITY, RESPECTIVELY. THE WORKABLE METHOD DEVELOPED IN THIS PROGRAM FOR THE ANALYSIS OF HALOETHERS IN WASTEWATER CONSISTED OF A LIQUID/LIQUID EXTRACTION USING METHYLENE CHLORIDE, AN EVAPORATION STEP USING KUDERNA-DANISH (K-D) EVAPORATORS, A COLUMN CHROMATOGRAPHIC CLEANUP PROCEDURE USING FLORISIL, ANOTHER K-D EVAPORATION OF THE FRACTION FROM THE FLORISIL COLUMN, AND SUBSEQUENT ANALYSIS BY GAS CHROMATOGRAPHY USING AN ELECTROLYTIC CONDUCTIVITY DETECTOR.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008209

PUBLICATION DATE: OCT 81

TITLE: DETERMINATION OF PHTHALATES IN INDUSTRIAL AND MUNICPAL WASTEWATERS.

PERSONAL AUTHOR: RHOADES, JOHN W.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHROMATOGRAPHY; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; *PHTHALATES; *POLLUTANTS; *RESEARCH REPORTS; *SAMPLING; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-232167; EPA-600/S4-81-063

ABSTRACT: THIS REPORT IS ONE OF A SERIES INVESTIGATING THE ANALYTICAL BEHAVIOR OF SELECTED PRIORITY POLLUTANTS AND SUGGESTS A SUITABLE TEST PROCEDURE FOR THEIR MEASUREMENT. THE STUDY WAS CONDUCTED IN TWO PHASES. IN PHASE I, WORK WAS CONDUCTED WITH CLEAN WATER AND WAS INTENDED TO PROVIDE INFORMATION WHICH WOULD GIVE DIRECTION TO PHASE II WORK CONDUCTED ON ACTUAL WASTEWATERS, AND TO SERVE AS A BASIS FOR COMPARISON FOR THE INFORMATION DEVELOPED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008210

PUBLICATION DATE: JUL 81

TITLE: WASTE DISCHARGE MONITORING REQUIREMENTS UNDER THE NPDES PERMITS PROGRAMS.

PERSONAL AUTHOR: MOORE, SUSAN R.; COVERT, TERRY C.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *EFFLUENTS; *EVALUATION; *GUIDELINES; *LEGISLATION; *MONITORING; *NPDES; PERMITS; REQUIREMENTS; RESEARCH REPORTS; *STANDARDS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: PB81-196941; EPA-600/S4-81-033

ABSTRACT: THIS STUDY WAS CONDUCTED BY SYSTEMS RESEARCH COMPANY (SRC) TO PROVIDE A MEANS OR "TOOL" TO AID THE EQUIVALENCY STAFF OF THE ENVIRONMENTAL MONITORING AND SUPPORT LABORATORY - CINCINNATI (EMSL-CINCINNATI) IN EVALUATING AND SPECIFYING COMPARABILITY DATA REQUIREMENTS OF APPLICATIONS SUBMITTED FOR THE APPROVAL OF ALTERNATE ANALYTICAL METHODS UNDER THE "NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" (NPDES) PERMITS PROGRAM. BASED UPON SRC'S EXAMINATION OF "EFFLUENT GUIDELINES AND STANDARDS" AND NPDES PERMITS, SIX TABLES WERE DEVELOPED TO PROVIDE INFORMATION OF THE PARAMETERS MOST CRITICAL TO THE NPDES PERMITS PROGRAM, THE TYPE OF DISCHARGE AND THE PARAMETERS TO BE MONITORED, AND THE NUMBER OF DISCHARGERS REQUIRED TO MONITOR SPECIFIC PARAMETERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 2216

IRIS ACCESSION NUMBER: EW008211

PUBLICATION DATE: MAR 81

TITLE: EVALUATION OF SOLID SORBENTS FOR WATER SAMPLING.

PERSONAL AUTHOR: HARRIS, J. C.; AND OTHERS

DESCRIPTOR: CHROMATOGRAPHY; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *RESINS; *SAMPLING; *SORBENTS; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: PB81-106585; EPA-600/S2-80-193

ABSTRACT: THIS REPORT DESCRIBES AND PRESENTS RESULTS OF A SYSTEMATIC LABORATORY INVESTIGATION OF THE APPLICABILITY OF MACRORETICULAR RESINS FOR GENERAL AND COMPOUND SPECIFIC SAMPLING OF ORGANICS, BASED ON SMALL SCALE CHROMATOGRAPHIC EXPERIMENTS. THE OBJECTIVE WAS TO DEVELOP SCREENING PROCEDURES AND A DATA BASE THAT WOULD ALLOW SELECTION OF THE RESIN(S) BEST SUITED TO A PARTICULAR SAMPLING APPLICATION AND SELECTION OF A SAMPLING MODULE SIZE AND CONFIGURATION THAT GIVES QUANTITATIVE COLLECTION OF CONTAMINANTS FROM THE

AQUEOUS STREAM OF INTEREST.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008212

PUBLICATION DATE: OCT 81

TITLE: SEWAGE SLUDGE PATHOGEN TRANSPORT MODEL PROJECT.

PERSONAL AUTHOR: DAWSON, J. F.; AND OTHERS

DESCRIPTOR: LAND APPLICATION; *MATHEMATICAL MODELS; MODELING; *PATHOGENS; *PUBLIC HEALTH; *RESEARCH REPORTS; *SEWAGE SLUDGE; SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-108994; EPA-600/S1-81-049

ABSTRACT: THE SEWAGE SLUDGE PATHOGEN TRANSPORT MODEL PREDICTS THE NUMBERS OF SALMONELLA, ASCARIS, AND POLIOVIRUSES WHICH MIGHT BE EXPECTED TO OCCUR AT VARIOUS POINTS IN THE ENVIRONMENT ALONG 13 DEFINED PATHWAYS. THESE PATHWAYS DESCRIBE THE USE OF DRIED OR LIQUID, RAW OR ANAEROBICALLY DIGESTED SLUDGE AS A CROPLAND FERTILIZER, DRIED RAW SLUDGE AS AN ANIMAL FEED SUPPLEMENT, AND COMPOSTED SLUDGE AS A RESIDENTIAL SOIL AMENDMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008213

PUBLICATION DATE: SEP 81

TITLE: RECREATIONAL WATER QUALITY AND HEALTH.

PERSONAL AUTHOR: NORTHROP, R. L.; AND OTHERS

DESCRIPTOR: *DATA COLLECTION; *PUBLIC HEALTH; *RECREATION; *RESEARCH REPORTS; *RESEARCH METHODOLOGY; SAMPLING; *SURVEYS; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-103599; EPA-600/S1-81-059

ABSTRACT: THE OVERALL OBJECTIVE OF THIS PILOT STUDY WAS TO DEVELOP AND EVALUATE METHODS TO DETERMINE THE EFFECT OF RECREATIONAL WATER QUALITY ON THE HEALTH OF PERSONS BATHING IN FRESH WATERS. THIS PILOT STUDY WAS DESIGNED TO DEVELOP: (1) SAMPLING AND RECRUITING METHODOLOGY OF FAMILIES ATTENDING FRESHWATER BEACHES; (2) SURVEY INSTRUMENTS FOR TELEPHONE INTERVIEWS TO OBTAIN DEMOGRAPHIC AND SOCIOECONOMIC INFORMATION, AND THE COLLECTION OF PROSPECTIVE DATA REGARDING HEALTH STATUS OF FAMILY MEMBERS; AND (3) THE SAMPLING DESIGN FOR THE COLLECTION OF CERTAIN WATER QUALITY VARIABLES IN ORDER TO BEST RELATE THE EFFECT OF THE RECREATIONAL WATER QUALITY ON THE HEALTH OF PERSONS BATHING IN THOSE WATERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008214

PUBLICATION DATE: MAR 81

TITLE: ASSESSMENT OF MUTAGENIC POTENTIAL OF MIXTURES OF ORGANIC SUBSTANCES IN RENOVATED WATER.

PERSONAL AUTHOR: NEAL, M. W.; AND OTHERS

DESCRIPTOR: *EFFLUENTS; *MUNICIPAL WASTES; *MUTAGENS; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *TOXICOLOGY; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER REUSE

DESCRIPTIVE NOTE: PB81-153843; EPA-600/S1-81-016

ABSTRACT: THIS STUDY WAS CONDUCTED TO DETERMINE THE PRESENCE OF MUTAGENIC ACTIVITY IN MUNICIPAL WASTEWATER AND TO EVALUATE THE PERFORMANCE OF AVAILABLE ADVANCED WASTEWATER TREATMENT SYSTEMS FOR REMOVING SUCH ACTIVITY. FURTHER, THE DISTRIBUTION OF THE DESCRIBED ACTIVITY AMONG VARIOUS CLASSES OF CHEMICAL COMPOUNDS WAS STUDIED IN AN ATTEMPT TO IDENTIFY THE ACTIVE FRACTIONS. THE STUDY WAS CONDUCTED UTILIZING RAPID IN VITRO BIOASSAYS FOR DETECTION OF MUTAGENIC ACTIVITY AND, THEREFORE, WAS EXPECTED TO PROVIDE A PRELIMINARY ASSESSMENT REGARDING THE MUTAGENIC HAZARDS LINKED TO THE POTENTIAL POTABLE USE OF RECLAIMED WASTEWATER. THE RESULTS OF THIS INVESTIGATION SHOULD BE OF VALUE TO THE ENVIRONMENTAL PROTECTION AGENCY AND OTHERS IN IDENTIFYING THE PROBLEM AREAS AND IN SETTING PRIORITIES FOR IN-DEPTH AND MORE SPECIALIZED TOXICOLOGICAL STUDIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008215

PUBLICATION DATE: JUN 81

TITLE: SOIL TEMPERATURE AND SEWAGE SLUDGE EFFECTS ON PLANT AND SOIL PROPERTIES.

PERSONAL AUTHOR: SHEAFFER, C. C.; AND OTHERS

DESCRIPTOR: AGRICULTURE; BACTERIA; *CASE STUDIES; *LAND APPLICATION; *NUTRIENTS; *RESEARCH REPORTS; *SEWAGE SLUDGE; SLUDGE DISPOSAL; *SOIL TEMPERATURE; *SOILS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-191199; EPA-600/S2-81-069

ABSTRACT: A FIELD STUDY WAS CONDUCTED AT THE UNIVERSITY OF MARYLAND PLANT RESEARCH FARM TO EVALUATE THE EFFECTS OF SOIL TEMPERATURE ON SEWAGE SLUDGE NUTRIENT RELEASE FOR CORN GROWTH. SURVIVAL OF BACTERIAL INDICATOR ORGANISMS AS A FUNCTION OF SOIL TEMPERATURE WAS ALSO DETERMINED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008216

PUBLICATION DATE: JUL 81

TITLE: PHYSICAL/CHEMICAL TREATMENT OF COKE PLANT WASTEWATER.

PERSONAL AUTHOR: OSANTOWSKI, RICHARD; GEINOPOLOS, ANTHONY

DESCRIPTOR: *CASE STUDIES; CHEMICAL TREATMENT; *COKE; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; PHYSICAL TREATMENT; *PILOT PLANTS; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-206021; EPA-600/S2-81-053

ABSTRACT: THE FULL REPORT DOCUMENTS A PILOT-PLANT STUDY OF THE USE OF ADVANCED WASTE TREATMENT METHODS IN UPGRADING METALLURGICAL COKEMAKING WASTEWATERS TO BEST AVAILABLE TECHNOLOGY (BAT) LEVELS. MOBILE TREATMENT UNITS, OPERABLE AT A FLOW RATE OF 19 L/MIN, WERE USED. TWO PHYSICAL/CHEMICAL TREATMENT TRAINS WERE STUDIED: (A) ALKALINE-CHLORINATION/FILTRATION/ACTIVATED-CARBON, AND (B) ALKALINE-CHLORINATION/SODIUM-BISULFITE-DECHLORINATION/FILTRATION. FOR EACH TREATMENT STUDIED, SAMPLES (INCLUDING TOXIC POLLUTANTS) AND OPERATIONAL DATA WERE OBTAINED FOR LATER USE IN ASSESSING AND COMPARING TREATMENT ADEQUACY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008217

PUBLICATION DATE: SEP 81

TITLE: TWO-STAGE BIOLOGICAL TREATMENT OF COKE PLANT WASTEWATER.

PERSONAL AUTHOR: OSANTOWSKI, R.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL TREATMENT; *CASE STUDIES; *COKEMAKING; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-240798; EPA-600/S2-81-052

ABSTRACT: THE REPORT DOCUMENTS A PILOT-PLANT STUDY OF THE USE OF ADVANCED WASTE TREATMENT METHODS IN UPGRADING METALLURGICAL COKEMAKING WASTEWATERS TO BEST AVAILABLE TECHNOLOGY (BAT) LEVELS. MOBILE TREATMENT UNITS, OPERABLE AT A FLOW RATE OF 19 L/MIN, WERE USED. METHODS USED INCLUDED TWO-STAGE ACTIVATED SLUDGE TREATMENT FOR REMOVAL OF ORGANIC CARBON COMPOUNDS AND AMMONIA; FILTRATION AND ACTIVATED CARBON WERE ALSO STUDIED AS POLISHING STEPS. FOR EACH TREATMENT STUDIED, SAMPLES (INCLUDING TOXIC POLLUTANTS) AND OPERATIONAL DATA WERE OBTAINED FOR LATER USE IN ASSESSING AND COMPARING TREATMENT ADEQUACY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008218

PUBLICATION DATE: MAR 81

TITLE: EVALUATION OF POWDERED ACTIVATED CARBON FOR REMOVAL OF TRACE ORGANICS AT NEW ORLEANS, LOUISIANA.

PERSONAL AUTHOR: EPTON, MICHAEL A.; BECNEL, JAMES F.

DESCRIPTOR: *ACTIVATED CARBON; *DRINKING WATER; *ORGANIC COMPOUNDS; *PERFORMANCE EVALUATION; POLLUTANTS; *POWDERED ACTIVATED CARBON; PROCESS DESCRIPTIONS; *RESEARCH REPORTS; *TRACE ORGANICS; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: PB81-161853; EPA-600/S2-81-027

ABSTRACT: SEVERAL ORGANIC CONTAMINANTS OF INTEREST TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) WERE FOUND IN NEW ORLEANS' FINISHED DRINKING WATER. A BENCH-SCALE RESEARCH PROGRAM DESIGNED TO DETERMINE THE EFFECTIVENESS OF POWDERED ACTIVATED CARBON (PAC) FOR REMOVING THESE ORGANIC CONTAMINANTS WAS CONDUCTED AT THE CITY'S CARROLLTON PURIFICATION PLANT. ADDITIONAL STUDIES ATTEMPTED TO EVALUATE THE EFFECTS OF CHANGING THE POINT OF CHLORINE ADDITION WITHIN THE NORMAL TREATMENT SCHEME AND TO CORRELATE NONSPECIFIC ANALYTICAL PARAMETERS (FLUORESCENCE, ULTRAVIOLET ABSORPTION, AND TOTAL ORGANIC CARBON (TOC) CONCENTRATION) WITH SPECIFIC ORGANICS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008219

PUBLICATION DATE: OCT 81

TITLE: INORGANIC CONTAMINANT REMOVAL FROM DRINKING WATER BY REVERSE OSMOSIS.

PERSONAL AUTHOR: HUXSTEP, MARTIN R.

DESCRIPTOR: *CONTAMINANTS; CONTAMINATION; *DRINKING WATER; GROUNDWATER; *INORGANICS; PERFORMANCE EVALUATION; PROCESS DESCRIPTIONS; *RESEARCH REPORTS; *REVERSE OSMOSIS; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: PB81-224420; EPA-600/S2-81-115

ABSTRACT: THE REMOVAL OF INORGANIC CONTAMINANTS FROM DRINKING WATER WAS STUDIED USING TWO REVERSE OSMOSIS (RO) TREATMENT SYSTEMS. A HIGH PRESSURE (400 PSI) AND LOW PRESSURE SYSTEM (200 PSI), EACH HAVING A RATED CAPACITY OF 1.82 L/SEC (28.9 GPM) OF PRODUCT WATER, WERE USED TO EVALUATE THEIR CAPABILITY FOR REMOVING VARIOUS INORGANIC CONTAMINANTS. A GROUNDWATER WAS SPIKED WITH VARYING

CONCENTRATIONS OF FLUORIDE, NITRATE, ARSENIC III, AND ARSENIC V, AND RUNS OF 2 TO 5 DAYS WERE CONDUCTED TO DETERMINE REJECTIONS. REMOVAL DATA WERE ALSO COLLECTED ON THE NATURAL CONSTITUENTS IN THE FEED WATER OF TOTAL DISSOLVED SOLIDS, HARDNESS, CALCIUM, MAGNESIUM, CHLORIDE, SODIUM, AND SULFATE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008220

PUBLICATION DATE: OCT 81

TITLE: ENGINEERING AND ECONOMIC ASSESSMENT OF AUTOHEATED THERMOPHILIC DIGESTION WITH AIR AERATION.

PERSONAL AUTHOR: KEOHAN, P. W.; AND OTHERS

DESCRIPTOR: *AEROBIC DIGESTION; *AUTOHEATED THERMOPHILIC AEROBIC DIGESTION; CASE STUDIES; *ECONOMIC FACTORS; *ENGINEERING; *RESEARCH REPORTS; SLUDGE; *SLUDGE STABILIZATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-102310; EPA-600/S2-81-171

ABSTRACT: ENGINEERING AND ECONOMIC ANALYSES WERE MADE OF TEST RESULTS OBTAINED BY W. J. JEWELL, R. M. KABRICK, AND J. A. SPADA IN EXPERIMENTS SPONSORED BY THE U. S. ENVIRONMENTAL PROTECTION AGENCY (EPA) ON A MODIFIED SLUDGE STABILIZATION PROCESS TERMED AUTOHEATED AEROBIC THERMOPHILIC DIGESTION (ATAD) WITH AIR AERATION. THE ATAD PROCESS TESTS HAD BEEN CONDUCTED IN 1979 AT THE BINGHAMTON-JOHNSON CITY SEWAGE TREATMENT PLANT IN BINGHAMTON, NEW YORK. IN THIS STUDY, THE JEWELL ETHAL. TESTS RESULTS WERE ANALYZED FOR SYSTEM KINETICS, HEAT BALANCE, AERATOR TRANSFER EFFICIENCY, PATHOGEN DESTRUCTION, DEWATERABILITY, AND HEAVY METAL INTERACTIONS. ADDITIONALLY, ECONOMIC VIABILITY OF ATAD WAS EXAMINED USING VERY CONSERVATIVE CRITERIA IN APPLICATION TO FACILITIES OF 1-, 10-, AND 100-MGD CAPACITY.

AVAILABILITY: NATIONAL TECHINCAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008221

PUBLICATION DATE: OCT 81

TITLE: PIPELINE LANDFALLS: A HANDBOOK OF IMPACT MANAGEMENT TECHNIQUES.

PERSONAL AUTHOR: GOWEN, ANN W.; GOETZ, MICHAEL J.

DESCRIPTOR: ECOLOGICAL FACTORS; *ENVIRONMENTAL IMPACTS; EQUIPMENT; *HANDBOOKS; LANDFALLS; *MANAGEMENT; *MARINE ENVIRONMENT; OUTER CONTINENTAL SHELF; *PETROLEUM PIPELINES; *PIPELINES; *PIPES; PLANNING; *RESEARCH REPORTS; *SITE SELECTION

DESCRIPTIVE NOTE: PB81-242950; EPA-600/S2-81-210

ABSTRACT: THIS PROJECT PROVIDES DETAILED INFORMATION ON THE ENVIRONMENTAL IMPACTS ASSOCIATED WITH OUTER CONTINENTAL SHELF (OCS) PIPELINES. THE REPORT IS DESIGNED TO BE USED BY SCIENTISTS OR ENGINEERS INVOLVED IN OFFSHORE PETROLEUM PIPELINE PLANNING, INCLUDING PIPELINE CORRIDORS AND PIPELINE LANDFALLS. THE REPORT PROVIDES AN OVERVIEW OF FACTORS THAT MAY BE CONSIDERED IN EVALUATING POTENTIAL PIPELINE LANDFALL SITES. MAJOR TECHNICAL AND ENVIRONMENTAL CONSTRAINTS DISCUSSED INCLUDE THE PHYSICAL, GEOLOGICAL, AND BIOLOGICAL CHARACTERISTICS OF SUGGESTED SITES. OTHER FACTORS INFLUENCING SITE SELECTION-COASTAL TOPOGRAPHY ADJACENT TO OFFSHORE DEVELOPMENT AREAS, ECONOMICS, EXISTING ONSHORE INFRASTRUCTURE, AND STATE AND LOCAL COASTAL POLICY-ARE ALSO PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008222

PUBLICATION DATE: OCT 81

TITLE: OIL SLICK DISPERSAL MECHANICS.

PERSONAL AUTHOR: OSAMOR, C. A.; AHLERT, R. C.

DESCRIPTOR: *DISPERSAL MECHANICS; *MARINE ENVIRONMENTS; OIL SLICKS; *OIL SPILLS; *POLLUTION CONTROL; *RESEARCH REPORTS; *SPILL CLEAN UP; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-105560; EPA-600/S2-81-199

ABSTRACT: THIS STUDY INVESTIGATES THE SPREADING AND DISSOLUTION BEHAVIOR OF SMALL OIL SLICKS FORMED FROM SPILLS OF 12 OILS. THE INCREASES IN AREA COVERED BY THE OILS DURING SPREADING EXPERIMENTS WERE DETERMINED USING PHOTOGRAPHIC TECHNIQUES. SPREADING EQUATIONS WERE DERIVED AND USED TO CORRELATE EXPERIMENTAL DATA. DERIVATION OF THE EQUATIONS PARALLELS FAY'S DEVELOPMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008223

PUBLICATION DATE: OCT 81

TITLE: AREAWIDE STORMWATER POLLUTION ANALYSIS WITH THE MACROSCOPIC PLANNING (ABMAC) MODEL.

PERSONAL AUTHOR: LITWIN, YORAM J.; AND OTHERS

DESCRIPTOR: *COMPUTER APPLICATIONS; *DATA ANALYSIS; *MANAGEMENT; *MODELING; *NONPOINT POLLUTION; *PLANNING; POLLUTANTS; *SURFACE RUNOFF; *STORMWATER; *WASTEWATER COLLECTION; *WATER STORAGE

DESCRIPTIVE NOTE: PB82-107947; EPA-600/S2-81-223

ABSTRACT: A SIMPLIFIED, CONTINUOUS, STORMWATER MANAGEMENT

MODEL (ABMAC) AND USER'S MANUAL HAVE BEEN DEVELOPED TO PROVIDE AN INEXPENSIVE, FLEXIBLE TOOL FOR PRELIMINARY ASSESSMENT OF STORMWATER MANAGEMENT STRATEGY OVER LARGE DEVELOPED AND UNDEVELOPED AREAS. THE MODEL, INTENDED FOR USE BY LOCAL ENGINEERS AND PLANNERS, IS ADAPTABLE FOR MINI-COMPUTER APPLICATIONS. THE MODEL IS DESIGNED TO SIMULATE RUNOFF, QUALITY, STORAGE, AND TREATMENT WHILE INCORPORATING TIME AND PROBABILITY INTO THE ANALYSIS. IT ALLOWS FOR SUBSTANTIAL FLEXIBILITY IN TERMS OF INPUT DATA REQUIREMENTS AND OUTPUT FORMATS. ALL SIMULATED QUANTITIES VARY ON A DAILY BASIS. THE MODEL CAN SIMULATE NONPOINT SOURCE POLLUTION FROM A MAXIMUM OF SIX LAND USE CATEGORIES. SIX QUALITY CONSTITUENTS ARE SIMULATED INCLUDING ONE USER SPECIFIED CONSTITUENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008225

PUBLICATION DATE: SEP 81

TITLE: FATE OF TOXIC AND NONCONVENTIONAL POLLUTANTS IN WASTEWATER TREATMENT SYSTEMS WITHIN THE PULP, PAPER, AND PAPERBOARD INDUSTRY.

PERSONAL AUTHOR: WALLIN, BRUCE K.; CONDREN, ARTHUR J.

DESCRIPTOR: AIR QUALITY; *CASE STUDIES; *EFFLUENTS; *INDUSTRIAL WASTES; *PAPERBOARD INDUSTRY; *PAPER INDUSTRY; *POLLUTANTS; *PULP INDUSTRY; SOLID WASTES; *TOXIC SUBSTANCES; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-247405; EPA-600/S2-81-158

ABSTRACT: FIELD STUDIES WERE UNDERTAKEN TO DETERMINE THE FATE OF TOXIC AND NONCONVENTIONAL POLLUTANTS PRESENT IN THE WASTEWATERS DISCHARGED FROM THE PULP, PAPER, AND PAPERBOARD INDUSTRY. A SAMPLING AND ANALYSIS PROGRAM WAS CONDUCTED AT TWO DEINK MILLS AND A GROUNDWOOD FINE PAPER MILL. EACH MILL EMPLOYED A WASTEWATER TREATMENT SYSTEM WHICH INCLUDED PRIMARY CLARIFICATION, HIGH RATE BIOLOGICAL TREATMENT, SECONDARY CLARIFICATION, AND COMBINED PRIMARY/SECONDARY SLUDGE DEWATERING.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008226

PUBLICATION DATE: SEP 81

TITLE: SOIL FILTRATION OF SEWAGE EFFLUENT OF A RURAL AREA.

PERSONAL AUTHOR: SABEY, B. R.; AND OTHERS

DESCRIPTOR: ALPINE ENVIRONMENTS; *CASE STUDIES; *EFFLUENTS; GROUNDWATER; *IRRIGATION; *LAND APPLICATION; *MOUNTAIN MEADOWS; MUNICIPAL WASTES; *RESEARCH REPORTS; *SEWAGE; *SOIL

FILTRATION; *SOILS; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-238073; EPA-600/S2-81-151

ABSTRACT: THE EFFECTS OF SPRINKLER-IRRIGATED MUNICIPAL SEWAGE EFFLUENT AND OF SURFACE TILE DRAINAGE ON A MOUNTAIN MEADOW WERE INVESTIGATED IN THE SUMMERS OF 1977 AND 1978. THE TREATMENTS CONSISTED OF COMBINATIONS OF IRRIGATIONS WITH EFFLUENT OR DITCH WATER AT THE RATE OF 7.5 CENTIMETERS/WEEK (CM/WEEK) AND OF DRAINAGE TILES OR NATURAL DRAINAGE. BEFORE APPLICATION, THE EFFLUENT CONTAINED SIGNIFICANTLY HIGHER LEVELS OF SOME WATER QUALITY PARAMETERS THAN THE DITCH WATER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008227

PUBLICATION DATE: OCT 81

TITLE: A STRESS FUNCTION FOR EVALUATING STRATEGIES FOR WATER QUALITY MANAGEMENT.

PERSONAL AUTHOR: BRIGHAM, WARREN U.; HEY, DONALD L.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *AQUATIC ORGANISMS; *BIOLOGY; MANAGEMENT; *MODELING; *POLLUTANTS; POLLUTION CONTROL; *RESEARCH REPORTS; *STRESS FUNCTION; TOXICITY; *TOXIC SUBSTANCES; *WATER QUALITY; *WATERSHEDS

DESCRIPTIVE NOTE: PB82-109828; EPA-600/S2-81-217

ABSTRACT: THIS INVESTIGATION EXPLORES THE RELATIONSHIP BETWEEN BIOLOGICAL COMMUNITIES AND THE PHYSICAL AND CHEMICAL CONDITIONS IN THE AQUATIC ENVIRONMENT. SEASONAL PATTERNS AND THE DURATION AND PROBABILITY OF THE OCCURRENCE OF CHEMICAL CONDITIONS AND PHYSICAL EVENTS ARE ESTABLISHED BY MEANS OF COMPUTER MODELLING. AN INSTANTANEOUS MEASURE OF STRESS IS CALCULATED BY SUMMING THE DECIMAL FRACTIONS OF THE 96-HR LETHAL CONCENTRATIONS (FOR BLUE-GILLS) OF EACH OF 21 TOXICANTS. THESE DATA ARE SUMMARIZED AS A QUASICONTINUOUS STRESS FUNCTION CALCULATED OVER 1-HR INTERVALS. THE STRESS FUNCTION IS RELATED TO FIVE DISTINCT BIOLOGICAL COMMUNITIES RANGING FROM THE MOST TO THE LEAST TOLERANT OF POLLUTION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008228

PUBLICATION DATE: JUL 81

TITLE: CHLORINE DIOXIDE FOR WASTEWATER DISINFECTION: A FEASIBILITY EVALUATION.

PERSONAL AUTHOR: ROBERTS, PAUL V.

DESCRIPTOR: *CASE STUDIES; CHEMICAL ANALYSIS; CHLORINATION;

*CHLORINE DIOXIDE; COSTS; *DISINFECTION; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: PB81-213357; EPA-600/S2-81-092

ABSTRACT: THIS REPORT DISCUSSES A STUDY IN WHICH CHLORINE DIOXIDE WAS COMPARED WITH CHLORINE FOR DISINFECTING WASTEWATER IN LABORATORY EXPERIMENTS AND AT A FULL-SCALE WASTEWATER TREATMENT PLANT. THE CRITERIA COMPARED INCLUDED COLIFORM KILL, INACTIVATION OF POLIOVIROUS AND OTHER INDICATORS, AND FORMATION OF HALOGENATED ORGANIC BY-PRODUCTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008229

PUBLICATION DATE: DEC 81

TITLE: STUDY OF CHLORINE DIOXIDE AND ITS METABOLITIES IN MAN.

PERSONAL AUTHOR: BIANCHINE, JOSEPH R.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *CHLORINATION; *CHLORINE DIOXIDE; *DISINFECTION; *DRINKING WATER; *HEALTH EFFECTS; *PUBLIC HEALTH; *RESEARCH REPORTS; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: PB82-109356; EPA-600/S1-81-068
ABSTRACT: TO ASSESS THE RELATIVE SAFETY OF CHRONICALLY ADMINISTERED CHLORINE WATER DISINFECTANTS IN MAN, A CONTROLLED STUDY WAS UNDERTAKEN. THE STUDY WAS CONDUCTED IN THREE PHASES. IN GENERAL, THE STUDY AFFIRMED THE RELATIVE SAFETY AND TOLERANCE OF NORMAL HEALTHY ADULT MALES AND NORMAL HEALTHY ADULT MALE G-6-PD DEFICIENT INDIVIDUALS TO THE DAILY INGESTION OF 2.5 MG OF CHLORITE FOR A 12 WEEK PERIOD.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008230

PUBLICATION DATE: SEP 81

TITLE: ULTRAVIOLET DISINFECTION OF A SECONDARY WASTEWATER TREATMENT PLANT EFFLUENT.

PERSONAL AUTHOR: SCHEIBLE, O. K.; BASSELL, C. D.

DESCRIPTOR: *CASE STUDIES; COLIFORM; COSTS; *DISINFECTION; *EFFLUENTS; MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ULTRAVIOLET RADIATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-242125; EPA-600/S2-81-152

ABSTRACT: ULTRAVIOLET (U.V.) DISINFECTION OF A FULL-SCALE SECONDARY EFFLUENT WAS INVESTIGATED DURING A 13-MONTH FIELD STUDY AT WALDWICK, NJ. THE EXPERIMENTAL PROGRAM WAS DESIGNED TO DEMONSTRATE THE FEASIBILITY OF ACHIEVING A FECAL COLIFORM DENSITY OF 200 MPN/100 ML BY U.V. IRRADIATION; TO DETERMINE THE EFFICIENCY OF U.V. DISINFECTION RELATIVE TO DOSAGE, POWER CONSUMPTION, AND EFFLUENT WATER QUALITY; AND TO ASSESS THE UTILITY OF THE FULL-SCALE UNIT RELATIVE TO OPERATION AND MAINTENANCE (O&M) REQUIREMENTS. THE IMPACT OF PHOTOREACTIVATION WAS INVESTIGATED DURING THE FIELD PROGRAM. UNIFORM PROCEDURES FOR THE CALCULATION OF DOSE AND THE SIZING OF U.V. SYSTEMS WERE ALSO DEVELOPED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008231

PUBLICATION DATE: OCT 81

TITLE: WASTEWATER DECHLORINATION STATE-OF-THE-ART FIELD SURVEY AND PILOT STUDIES.

PERSONAL AUTHOR: CHEN, CHING-LIN; GAN, HENRY B.

DESCRIPTOR: ACTIVATED CARBON; *CASE STUDIES; COST EFFECTIVENESS; *DECHLORINATION; *PERFORMANCE EVALUATION; *PROCESS DESCRIPTIONS; *RESEARCH REPORTS; *STATE-OF-THE-ART REVIEWS; SULFUR DIOXIDE; *WASTEWATER TREATMENT.

DESCRIPTIVE NOTE: PB82-102336; EPA-600/S2-81-169
ABSTRACT: A STUDY OF DECHLORINATION WAS CONDUCTED IN THE COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY TO DETERMINE THE UTILITY AND EFFICIENCY OF THE SULFUR DIOXIDE METHOD AND TO PROVIDE A COST-EFFECTIVE COMPARISON OF SULFUR DIOXIDE AND TWO OTHER METHODS OF DECHLORINATION, NAMELY, ACTIVATED CARBON AND HOLDING TANK PROCESSES. STUDY OBJECTIVES WERE ACCOMPLISHED THROUGH THREE MAIN PHASES OF WORK: LITERATURE REVIEW, PILOT-SCALE TESTING, AND FULL-SCALE EVALUATION IN THE FIELD.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008232

PUBLICATION DATE: OCT 81

TITLE: DATA BASE FOR INFLUENT HEAVY METALS IN PUBLICLY OWNED TREATMENT WORKS.

PERSONAL AUTHOR: MINEAR, ROGER A.; AND OTHERS

DESCRIPTOR: *DATA BASES; *DATA COLLECTION; *HEAVY METALS; *INDUSTRIAL WASTES; *INFLUENTS; *INFORMATION SOURCES; *PROGRAM DESCRIPTIONS; *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-108168; EPA-600/S2-81-220

ABSTRACT: RESULTS ARE PRESENTED OF A 2-YEAR STUDY INVOLVING THE IDENTIFICATION AND ASSEMBLY OF A DATA BASE ON INFLUENT HEAVY METALS IN THE PUBLICLY OWNED TREATMENT WORKS (POTW'S) OF THE UNITED STATES. THE GENERAL CHARACTER OF THE DATA BASE IS PROVIDED WITH RESPECT TO ASSOCIATED DESCRIPTORS (AMONG WHICH ARE THE PERCENT OF INDUSTRIAL CONTRIBUTION, COMBINED SEWERS, AND INFILTRATION/INFLOW, THE SAMPLE FREQUENCY AND TYPE, AND THE ANALYTICAL METHOD). WASTEWATER TREATMENT PLANT LABORATORIES WERE EVALUATED DURING THE STUDY AND GENERALLY FOUND TO BE SATISFACTORY WITHIN THE FRAMEWORK OF THE EVALUATION METHOD.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008233

PUBLICATION DATE: JUL 81

TITLE: EVALUATION OF THE FULL-SCALE APPLICATION OF ANAEROBIC SLUDGE DIGESTION AT THE BLUE PLAINS WASTEWATER TREATMENT FACILITY--WASHINGTON, DC.

PERSONAL AUTHOR: TORPEY, WILBUR; AND OTHERS

DESCRIPTOR: *ANAEROBIC DIGESTION; *CASE STUDIES; MESOPHILIC DIGESTION; MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; PROCESS DESCRIPTIONS; *RESEARCH REPORTS; *SLUDGE TREATMENT; *TECHNOLOGICAL ADVANCEMENTS; THERMOPHILIC DIGESTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-219123; EPA-600/S2-81-105

ABSTRACT: THIS STUDY INVESTIGATES THE APPLICATION OF A NEW MESOPHILIC-THERMOPHILIC ANAEROBIC SLUDGE DIGESTION PROCESS TO THE EXISTING MESOPHILIC SLUDGE DIGESTION SYSTEM AT THE DISTRICT OF COLUMBIA BLUE PLAINS WASTEWATER TREATMENT PLANT. THE STUDY ALSO EVALUATES IMPROVEMENTS IN THE EXISTING MESOPHILIC DIGESTION OPERATION AND POSSIBLE APPLICATION OF THERMOPHILIC DIGESTION TECHNOLOGY. DETAILED ANALYSES IN THE FULL REPORT ARE DESIGNED TO FACILITATE THE USE OF THE APPROACH AS A CASE STUDY MODEL FOR OTHER WASTEWATER TREATMENT FACILITIES CONSIDERING THE PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22166

IRIS ACCESSION NUMBER: EW008234

PUBLICATION DATE: SEP 82

TITLE: HOW TO SOLVE SOLID WASTE AND DRINKING WATER PROBLEMS SIMULTANEOUSLY.

PERSONAL AUTHOR: BAILIE, ROBERT E.

DESCRIPTOR: *DESIGN; *DRINKING WATER; *ECONOMICS; *ENERGY; *ENERGY CONSERVATION; *OPERATIONS (WATER); *PLANNING; *PROJECT DESIGN; *RESOURCE RECOVERY; *REVERSE OSMOSIS; *SOLID WASTES; *DESALINATION; WASTE DISPOSAL; *WATER TREATMENT

DESCRIPTIVE NOTE: 28-29, 31P.

ABSTRACT: DESCRIBED IS HOW MODERN TECHNOLOGY OFFERS MODERATE-SIZE COMMUNITIES THE POSSIBILITY OF COMBINING MODULAR REFUSE INCINERATORS WITH REVERSE OSMOSIS TO SOLVE SOLID WASTE AND DRINKING WATER PROBLEMS WITH ONE PROJECT.

AVAILABILITY: AMERICAN CITY 8 COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008235

PUBLICATION DATE: SEP 82

TITLE: LEARNING TO LOVE THE COMPUTER AGE.

DESCRIPTOR: *ADMINISTRATION; *CASE STUDIES; *COMPUTERS; *COMPUTER APPLICATIONS; *GOVERNMENT; HOSPITALS; LAW ENFORCEMENT; LIBRARIES; *MANAGEMENT; MASSACHUSETTS; *PLANNING; *PUBLIC WORKS; *SCHOOLS

DESCRIPTIVE NOTE: 59-61P.

ABSTRACT: DESCRIBED IS THE USE OF COMPUTERS IN WORCESTER, MASSACHUSETTS, FOR UPGRADING CITY SERVICES. EXAMPLES ARE GIVEN FOR THE LOCAL SCHOOLS, HOSPITALS, LIBRARIES, LAW ENFORCEMENT, AND DEPARTMENT OF PUBLIC WORKS.

AVAILABILITY: AMERICAN CITY 8 COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008236

PUBLICATION DATE: SEP 82

TITLE: SO YOU WANT TO COMPOST SLUDGE...

PERSONAL AUTHOR: NEWTON, JAMES J.

DESCRIPTOR: *COSTS; *COMPOSTING; *ENERGY CONSERVATION; *ENVIRONMENTAL IMPACTS; *OPERATIONS (WASTEWATER); *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 63-66P.

ABSTRACT: ALTHOUGH COMPOSTING ON A MUNICIPAL SCALE HAS HAD A REPUTATION FOR HIGH COSTS AND POOR RESULTS, IT IS ENJOYING A RESURGENCE AS A RESULT OF ITS LOW ENERGY REQUIREMENT AND ENVIRONMENTAL ACCEPTANCE. SEVERAL PROCESSES AND CHARACTERISTICS OF THE PROCESSES ARE DESCRIBED.

AVAILABILITY: AMERICAN CITY 8 COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008237

PUBLICATION DATE: SEP 82

TITLE: MAKE VACUUM FILTER WOES HISTORY.

DESCRIPTOR: *CASE STUDIES; *COSTS; *FILTER SCREENS; *FILTRATION; *ILLINOIS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *VACUUM FILTERS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 69-70P.

ABSTRACT: PROCEDURES USED BY CHICAGO'S NORTH SHORE SANITARY DISTRICT TO KEEP ITS FILTER SCREENS CLEAN ARE DESCRIBED. THE PROCESS INVOLVES WASHING THEM WITH SULFAMIC ACID. THE RESULT HAS BEEN IMPROVED WATER QUALITY AND REDUCED MAINTENANCE COSTS.

AVAILABILITY: AMERICAN CITY & COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008238

PUBLICATION DATE: SEP 82

TITLE: OXIDATION-STABILIZATION KEEPS SLUDGE FARM HEALTHY.

DESCRIPTOR: *BIF PROCESS; *CASE STUDIES; *COSTS; *LAND APPLICATION; *OPERATIONS (WASTEWATER); *OXIDATION; *PENNSYLVANIA; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 75-77P.

ABSTRACT: DESCRIBED IS A CHEMICAL OXIDATION PROCESS USED BY A PENNSYLVANIA TOWNSHIP TO PREPARE SLUDGE FOR A SLUDGE FARM DISPOSAL OPERATION.

AVAILABILITY: AMERICAN CITY & COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008239

PUBLICATION DATE: SEP 82

TITLE: SLIPLINING ENDS GADSDEN INFILTRATION.

DESCRIPTOR: *ALABAMA; *CASE STUDIES; *INFILTRATION; *MAINTENANCE; *PIPES; *SEWERS; *SLIPLINING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 79-80P.

ABSTRACT: FACED WITH LEAKING PIPE JOINTS IN 2000-FOOT SECTION OF POORLY SUPPORTED SEWERS, OFFICIALS IN THIS ALABAMA CITY USED SLIPLINING TO BLOCK OUT INFILTRATION.

AVAILABILITY: AMERICAN CITY & COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008240

PUBLICATION DATE: SEP 82

TITLE: MAKE 24-HOUR SERVICE A 'TEAM' EFFORT.

PERSONAL AUTHOR: BARLOW, WILLIAM P.

DESCRIPTOR: *AFTER-HOURS; *CASE STUDIES; *CITY SERVICES; *EFFICIENCY; *EMERGENCY SERVICES; *PUBLIC SERVICES; *RESPONSE TEAMS; *SERVICES; *WATER SUPPLY

DESCRIPTIVE NOTE: 83P.

ABSTRACT: AN ILLINOIS COMMUNITY ESTABLISHED A PUBLIC SERVICE RESPONSE TEAM TO EFFICIENTLY HANDLE CITIZEN REQUESTS FOR SERVICES THAT DEMAND IMMEDIATE ATTENTION OR ACTION AFTER-HOURS.

AVAILABILITY: AMERICAN CITY & COUNTY V97 N9

IRIS ACCESSION NUMBER: EW008241

PUBLICATION DATE: SEP 82

TITLE: FACE TO FACE.

DESCRIPTOR: *AWWA; COMPUTER APPLICATION; *DATA BASES; *INFORMATION DISSEMINATION; *INFORMATION RETREIVAL; *PROGRAM DESCRIPTIONS; *WATER SUPPLY; *WATER TREATMENT; *WATER RESOURCES; *WATERNET

DESCRIPTIVE NOTE: 18-19, 22-26P.

ABSTRACT: AN EXAMINATION OF THE AWWA'S WATERNET COMPUTERIZED SYSTEM IS PRESENTED IN THIS INTERVIEW WITH KURT KEELEY, THE TECHNICAL INFORMATION SERVICES MANAGER OF AWWA. DISCUSSED ARE THE COMPONENTS OF WATERNET, ITS OPERATION AND ADVANTAGES, AND THE COSTS ASSOCIATED WITH ITS USE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V74 N9

IRIS ACCESSION NUMBER: EW008242

PUBLICATION DATE: SEP 82

TITLE: CREATIVE FINANCING TECHNIQUES FOR WATER UTILITIES.

PERSONAL AUTHOR: WILLIAMS, PAUL C.

DESCRIPTOR: *BONDS; *CAPITAL IMPROVEMENTS; *CONSTRUCTION; *ECONOMIC FACTORS; *FINANCING; *MANAGEMENT; *PLANNING; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 443-449P.

ABSTRACT: THIS ARTICLE IS A COMPREHENSIVE REVIEW OF CONTEMPORARY METHODS OF FINANCING WATER UTILITY CAPITAL EXPANSIONS AND IMPROVEMENTS. IN ANSWER TO THE VOLATILE MARKETS FOR SELLING LONG-TERM DEBT, NEW FORMS OF FINANCING ARE BEING USED. IN ALMOST ALL CASES, SUCH INNOVATIONS TRANSFER SOME OF THE RISK OF THE DEBT TO THE ISSUER, AND THEREFORE UTILITY FINANCIAL MANAGERS MUST BE THOROUGHLY ACQUAINTED WITH THE PROS AND CONS OF INNOVATIVE FINANCING TECHNIQUES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION; V74 N9

IRIS ACCESSION NUMBER: EW008243

PUBLICATION DATE: SEP 82

TITLE: THE ROLE OF INVESTMENT BANKING FIRMS IN MANAGING WATER PROJECT FINANCING.

PERSONAL AUTHOR: STARR, FRANK C.; FORBES, RONALD W.

DESCRIPTOR: *BANKS; *ECONOMIC FACTORS; *FINANCING; *MANAGEMENT; *PLANNING; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 451-455P.

ABSTRACT: IN ADDITION TO THEIR TRADITIONAL ROLES OF ADVISING UTILITIES ABOUT SECURITIES THAT WILL APPEAL TO INVESTORS AND PROVIDING RISK-BEARING SERVICES IN CONNECTION WITH MARKETING AND DISTRIBUTION OF LONG-TERM DEBT, INVESTMENT BANKING FIRMS ARE NOW AIDING MANY UTILITIES WITH POSTSALE STRATEGIC FINANCIAL PLANNING. THE CURRENT VOLATILE BOND MARKETS AND UNCERTAIN ECONOMIC CONDITIONS MAKE SUCH SERVICES A DECISIVE FACTOR IN MAINTAINING FISCALLY RESPONSIBLE WATER SERVICES. THIS ARTICLE DEFINES AND EXPLAINS THE PART INVESTMENT BANKING FIRMS PLAY IN BOTH ROLES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V74 N9

IRIS ACCESSION NUMBER: EW008244

TITLE: FUNDING IMPROVEMENTS WITH DEBT CAPITAL AND REVENUES.

PERSONAL AUTHOR: MARSHALL, W. N.

DESCRIPTOR: BONDS; *CAPITAL IMPROVEMENTS; *CONSTRUCTION; *DEBT CAPITAL; *ECONOMIC FACTORS; *FINANCING; *PLANNING; *REVENUES; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 456-459P.

ABSTRACT: WATER UTILITIES, ESPECIALLY THOSE WITH LOW BOND RATINGS, CAN FUND CAPITAL IMPROVEMENTS WITH A COMBINATION OF DEBT CAPITAL AND REVENUES. THE CASH COVERAGE FACTOR AND THE NUMBER OF YEARS REQUIRED FOR COMPLETION OF A CONSTRUCTION PROGRAM ARE MORE INFLUENTIAL THAN INTEREST RATES IN DETERMINING THE OPTIMUM AMOUNT OF LONG-TERM DEBT TO ISSUE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V79 N4

IRIS ACCESSION NUMBER: EW008245
PUBLICATION DATE: SEP 82

TITLE: FORECASTING SHORT-TERM REVENUES WATER AND SEWER UTILITIES.

PERSONAL AUTHOR: BOLAND, JOHN J.; AND OTHERS

DESCRIPTOR: *COMPUTER PROGRAMS; *ECONOMIC FACTORS; *FINANCING; *FORECASTING; *MODELING; *PLANNING; *REVENUES; *SEWERS; *UTILITIES; *WATER RESOURCES; *WATER USE; *WATER SUPPLY

DESCRIPTIVE NOTE: 460-465P.

ABSTRACT: SHORT-TERM REVENUES FOR WATER UTILITIES DEPEND ON VARIABLES IN WATER USE, I.E., THOSE VARIABLES MOST OFTEN ASSOCIATED WITH SEASONAL USE DURING THE GROWING SEASON. SINCE FORECASTS OF REVENUE FOR ONE AND TWO YEARS IN THE FUTURE ARE IMPORTANT FOR BUDGETING AND PLANNING, THE WASHINGTON (D.C.) SUBURBAN SANITARY COMMISSION (WSSC) DEVELOPED A COMPUTERIZED MODEL THAT INCORPORATES A SERIES OF VARIABLES SUCH AS WEATHER CONDITIONS AND MOISTURE DEFICITS. THE MODEL IS BEING USED CURRENTLY TO FORECAST UPPER AND LOWER LEVELS OF REVENUE FOR THE NEXT 24 MONTHS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V74 N9

IRIS ACCESSION NUMBER: EW008246
PUBLICATION DATE: SEP 82

TITLE: THE FINANCIAL IMPACT OF WATER RATE CHANGES.

PERSONAL AUTHOR: SANG, WONG H.

DESCRIPTOR: *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *PLANNING; *WATER CONSERVATION; *WATER RATES; *WATER RESOURCES; *WATER USE

DESCRIPTIVE NOTE: 466-469P.

ABSTRACT: INCREASING WATER RATES CAN PRODUCE CONTRADICTORY RESULTS. IF THE PURPOSE OF RAISING RATES IS TO CONSERVE WATER, THERE IS OFTEN LESS ELASTICITY IN DEMAND THAN ANTICIPATED. IF THE PURPOSE OF RAISING RATES IS TO IMPROVE REVENUE SHORTFALLS, THERE IS OFTEN MORE ELASTICITY IN DEMAND THAN ANTICIPATED. THESE TRENDS, ALONG WITH CONSIDERATION OF SOME RELATIVELY INFLEXIBLE OPERATING EXPENSES, MUST BE FACTORED INTO RATE CHANGES BEFORE OBJECTIVES CAN BE ACHIEVED.

AVAILABILITY: AMERICAN WATER WORKS ASS3CIATION JOURNAL; V74 N9

IRIS ACCESSION NUMBER: EW008247
PUBLICATION DATE: SEP 82

TITLE: EVALUATING WATER TREATMENT TECHNIQUES FOR BARIUM REMOVAL.

PERSONAL AUTHOR: KRAUSE, TERRY L.; STOVER, ENOS L.

DESCRIPTOR: *BARIUM; *CASE STUDIES; *DRINKING WATER; ECONOMIC FACTORS; *GROUNDWATER; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 478-485P.

ABSTRACT: GROUNDWATER FROM ISOLATED WELLS IN NORTHERN ILLINOIS HAS BEEN FOUND TO CONTAIN HIGH LEVELS OF BARIUM, USUALLY IN CONJUNCTION WITH LOW LEVELS OF SULFATE. FOR ONE TEST WELL IN THIS AREA, PILOT STUDIES OF ION EXCHANGE, LIME SOFTENING, AND CHEMICAL PRECIPITATION-DIRECT FILTRATION WERE UNDERTAKEN TO DETERMINE THE EFFECTIVENESS OF EACH TECHNIQUE IN REMOVING BARIUM FROM THE GROUNDWATER. ALL TREATMENT TECHNIQUES WERE EFFECTIVE IN REMOVING BARIUM, BUT THE ION-EXCHANGE SYSTEM WAS THE MOST ECONOMIC.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V79 N4

IRIS ACCESSION NUMBER: EW008248

PUBLICATION DATE: SEP 82

TITLE: CHLOROPHYLL--A RAW WATER QUALITY PARAMETER.

PERSONAL AUTHOR: JONES, R. ANNE; LEE, G. FRED

DESCRIPTOR: *ALGAE; *ANALYTICAL TECHNIQUES; *CHLOROPHYLL; *LABORATORY PROCEDURES; *MEASUREMENT; NUTRIENTS; *RESEARCH REPORTS; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 490-494P.

ABSTRACT: THE AUTHORS PRESENT A PROCEDURE FOR MEASURING CHLOROPHYLL, WHICH IS A SIMPLER AND LESS COSTLY ANALYTICAL METHOD THAN ALGAL COUNTING. WATER UTILITIES MAY BE ABLE TO CORRELATE HIGH CHLOROPHYLL LEVELS WITH POOR RAW WATER QUALITY. THE AUTHORS DISCUSS SEVERAL APPLICATIONS IN WHICH SUCH CORRELATIONS MAY BE USEFUL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V74 N9

IRIS ACCESSION NUMBER: EW008249

PUBLICATION DATE: SEP 82

TITLE: COMBINED SEWERS: MAINTAINING YESTERDAY'S INFRASTRUCTURE WITH TODAY'S TECHNOLOGY.

PERSONAL AUTHOR: KOEPER, JOHN F.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *COMBINED SEWERS; *COMPUTER APPLICATIONS; *DESIGN; *EQUIPMENT; FACILITIES; MAINTENANCE; *MAINTENANCE (PREVENTATIVE); PIPES (WATER); *SEWER SYSTEMS; *SEWERS; WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 1252-1258P.

ABSTRACT: THIS ARTICLE EXAMINES VARIOUS STRATEGIES FOR MAINTAINING EXISTING COMBINED SEWER INFRASTRUCTURES. TO REDUCE RISKS TO THE PUBLIC AND TO LIMIT EXCESSIVE COSTS, THE METROPOLITAN ST. LOUIS SEWER DISTRICT IS DEVELOPING A METHODOLOGY FOR PREDICTING, HIGH-RISK AREAS WITH SEWER COLLAPSE POTENTIAL. THIS PROCESS, DESCRIBED IN DETAIL, INCORPORATES THE USE OF COMPUTER-AIDED DESIGN AND DRAFTING TO AID IN IDENTIFYING PROBLEM AREAS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008250

PUBLICATION DATE: SEP 82

TITLE: MONITOR: SLUDGE AND LAND - WHERE WE ARE, BUT WHERE ARE WE GOING?

PERSONAL AUTHOR: FELICIANO, D. V.

DESCRIPTOR: *LAND APPLICATION; *MANAGEMENT; MUNICIPAL WASTES; PUBLIC HEALTH; REGULATIONS; *SLUDGE; STANDARDS; *STATE-OF-THE-ART REVIEWS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1259-1266P.

ABSTRACT: THIS ARTICLE PRESENTS A COMPREHENSIVE REVIEW OF LAND APPLICATION OF MUNICIPAL SLUDGE. THE EMPHASIS IS ON PROPER MANAGEMENT, RECLAMATION OF RESOURCES, RISK CONSIDERATIONS, A REVIEW OF THE REALITIES OF SLUDGE, AND HOW ALL THESE RELATE TO THE USE OF LAND APPLICATION OF SLUDGE. ALSO EXAMINED ARE CHEMICAL CONSTITUENTS OF SLUDGE, EPA REGULATIONS, PUBLIC HEALTH ASPECTS, AND VARIOUS PUBLIC AND PRIVATE POLICIES AFFECTING SLUDGE DISPOSAL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008251

PUBLICATION DATE: SEP 82

TITLE: SLUDGE MARKETING: THE QUIET REVOLUTION.

PERSONAL AUTHOR: FLYNN, K. C.

DESCRIPTOR: *CASE STUDIES; *COMPOSTING; *ECONOMIC FACTORS; *HEALTH; *LAND APPLICATION; *MANAGEMENT; *MARKETING; *MUNICIPAL WASTES; *SLUDGE; *WASTE DISPOSAL

76

DESCRIPTIVE NOTE: 1267-1269P.

ABSTRACT: THIS ARTICLE EXAMINES THE MARKETING AND SELLING OF SLUDGE TO THE PUBLIC. SEVERAL CASE STUDIES ARE PROVIDED THAT DISCUSS THE PROBLEMS, BOTH TECHNICAL AND SOCIAL, ASSOCIATED WITH SELLING MUNICIPAL WASTES, AND SHOW HOW SOME CITIES HAVE OVERCOME THESE PROBLEMS. COMPOSTING, RECYCLING, AND EPA REGULATIONS ARE AMONG OTHER TOPICS ADDRESSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008252

PUBLICATION DATE: SEP 82

TITLE: UPGRADING A LARGE TREATMENT PLANT--PROBLEMS AND SOLUTIONS.

PERSONAL AUTHOR: MOSHIRI, MICHAEL; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *CONSTRUCTION; *DESIGN; ECONOMIC FACTORS; EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); PROJECT DESCRIPTIONS; *UPGRADING; *WASTEWATER TREATMENT PLANTS

DESCRIPTIVE NOTE: 1270-128P.

ABSTRACT: THE FEDERAL CONSTRUCTION GRANTS PROGRAM HAS, OVER THE PAST DECADE, PRODUCED AN UNPRECEDENTED LEVEL OF TREATMENT PLANT CONSTRUCTION ACTIVITY. WITH CONVENTIONAL TREATMENT SYSTEMS, A CONSIDERABLE BODY OF KNOWLEDGE HAS BEEN DEVELOPED OVER THE YEARS SO THAT TREATMENT PLANT DESIGNERS AND OPERATORS ARE ABLE TO ANTICIPATE AND ELIMINATE MAJOR START-UP PROBLEMS. AS A RESULT, POST-CONSTRUCTION EXPENDITURES ARE MINIMIZED AND START-UP AND OPTIMIZATION OF EQUIPMENT FOLLOW PREDICTABLE PATTERNS. WITH NEWER AND MORE SOPHISTICATED TREATMENT SYSTEMS, HOWEVER, THE BODY OF KNOWLEDGE DEVELOPED ON PROBLEM AREAS IS SMALL, AND DESIGNERS ARE IN A DIFFICULT POSITION TO ANTICIPATE EVERY POTENTIAL DIFFICULTY. THUS, START-UP AND OPTIMIZATION MAY BE BOTH COMPLICATED AND EXPENSIVE. OFTEN, ADDITIONAL CAPITAL EXPENDITURES ARE REQUIRED BEFORE SYSTEMS WILL OPERATE AS ORIGINALLY INTENDED. DURING THE PAST 10 YEARS THE SANITATION DISTRICTS OF LOS ANGELES COUNTY, CALIF., HAVE PLACED INTO OPERATION NEARLY 70 SEPARATE PLANT EXPANSION AND IMPROVEMENT PROJECTS WITH A COMBINED CAPITAL COST OF NEARLY $150 MILLION. HOWEVER, A FEW OF THE PROJECTS-PRIMARILY THOSE THAT INCORPORATED NEW TECHNOLOGY-EXPERIENCED SIGNIFICANT DIFFICULTIES. THIS PAPER DOCUMENTS SOME OF THESE PROJECTS AND DISCUSSES CAUSE/EFFECT RELATIONSHIPS, AND ULTIMATE RESOLUTION OF PROBLEMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008253

PUBLICATION DATE: SEP 82

TITLE: ALPHA AND BETA FACTORS FOR DOMESTIC WASTEWATER.

PERSONAL AUTHOR: TEWARI, PREM K.; BEWTRA, JATINDER K.

DESCRIPTOR: *AERATION; *BIOLOGICAL PROCESSES; *DISSOLVED OXYGEN; EFFLUENTS; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1281-1287P.

ABSTRACT: LABORATORY STUDIES WERE CONDUCTED SIMULTANEOUSLY ON WASTEWATER AND TAP WATER SAMPLES TO DETERMINE THE EFFECTS OF THE NATURE OF WASTEWATER, TANK GEOMETRY, AND RATE OF ENERGY INPUT ON THE ALPHA FACTOR (A RATIO BETWEEN RATES OF OXYGEN UPTAKE IN WASTEWATER AND TAP WATER) AND ON THE BETA FACTOR (A RATIO BETWEEN DISSOLVED OXYGEN SATURATION CONCENTRATION IN WASTEWATER AND TAP WATER). THREE DIFFERENT TANK GEOMETRIES WERE USED TO ANALYZE FOUR DIFFERENT TYPES OF WASTEWATERS COLLECTED FROM TWO DIFFERENT SOURCES. THE RESULTS SHOWED THAT ALPHA VALUES WERE NOT SIGNIFICANTLY AFFECTED BY THE AIRFLOW RATE, TANK GEOMETRY, AND LIQUID DEPTH; BUT, RATHER, THESE VALUES WERE DEPENDENT ON THE CHARACTERISTICS OF WASTEWATER. IT WAS ALSO OBSERVED THAT THE BETA VALUES WERE NOT SIGNIFICANTLY AFFECTED BY THE OPERATING PARAMETERS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008255

PUBLICATION DATE: SEP 82

TITLE: MICROBIAL CONTAMINATION OF CONTINENTAL SHELF SEDIMENTS BY WASTEWATER.

PERSONAL AUTHOR: O'MALLEY, MARRIA L.; AND OTHERS

DESCRIPTOR: *BACTERIA; *MICROORGANISMS; *OCEANS; *OCEAN DISPOSAL; PATHOGENS; *RESEARCH REPORTS; *SEDIMENTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1311-1317P.

ABSTRACT: COLIFORMS (TC), FECAL COLIFORMS (FC), AND FECAL STREPTOCOCCI (FS), AS WELL AS POTENTIALLY PATHOGENIC AMOEBAE (ACANTHAMOEBA), WERE RECOVERED FROM SURFICIAL SEDIMENT SAMPLES FROM THE VICINITY OF AN OPEN OCEAN WASTEWATER SLUDGE DISPOSAL SITE IN THE MIDDLE ATLANTIC BIGHT FROM 1978 TO 1980. THE HIGHEST PERCENTAGE OF POSITIVE STATIONS FOR TC (38%) AND FOR FC (25%) WERE LOCATED LESS THAN 9 KM (5 NAUTICAL MILES) FROM THE CENTER OF THE DISPOSAL SITE, AND THE PERCENTAGE OF POSITIVE STATIONS DECREASED RELATIVE TO INCREASING DISTANCE FROM THE CENTER OF THE SITE. GENERALLY, A DECREASE IN THE PERCENTAGE OF PERCENTAGE OF POSITIVE STATIONS AS WELL AS A DECREASE IN AREAL EXTENT OVER TIME WAS NOTED. ANALYSIS OF THE TC DATA INDICATED SLUDGE MATERIALS TO BE SETTLING IN TOPOGRAPHIC LOWS. TC, FS, AND AMOEBAE PERSIST

LONGER IN THESE SEDIMENTS THAN FC. THEREFORE, FC CAN BE CONSIDERED AS INDICATIVE OF RECENT DEPOSITION OF MATERIALS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008256

PUBLICATION DATE: SEP 82

TITLE: DETERMINATION OF TOTAL KJELDAHL NITROGEN AND TOTAL PHOSPHORUS IN SURFACE WATERS AND WASTEWATERS.

PERSONAL AUTHOR: BOWMAN, GEORGE T.; DELFINO, JOSEPH J.

DESCRIPTOR: *INSTRUMENTATION; *LABORATORY PROCEDURES; *NITROGEN; *PHOSPHOROUS; *RESEARCH REPORTS; *WASTEWATER ANALYSIS; *WATER QUALITY

DESCRIPTIVE NOTE: 1324-1330P.

ABSTRACT: A PREVIOUSLY PUBLISHED TECHNIQUE FOR THE SIMULTANEOUS DETERMINATION OF TOTAL KJELDAHL NITROGEN (TKN) AND TOTAL PHOSPHORUS (TP) IN SURFACE WATERS AND WASTEWATERS WAS IMPROVED AND THEN EVALUATED THROUGH 3 YEARS OF ROUTINE OPERATION AT THE WISCONSIN STATE LABORATORY OF HYGIENE (WSLH). INCREASED PRECISION IS NOTED FOR BOTH THE TKN AND TP SEMIAUTOMATED PROCEDURES, WHEREAS IMPROVED ACCURACY (RECOVERY) IS OBSERVED FOR TKN MEASUREMENTS USING NICOTINIC ACID AS A STANDARD.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V54 N9

IRIS ACCESSION NUMBER: EW008261

PUBLICATION DATE: SEP 82

TITLE: ENERGY AUDITS ARE GOOD INVESTMENTS.

PERSONAL AUTHOR: SAXON, TREVOR

DESCRIPTOR: *COSTS; *ECONOMICS; *ENERGY; *ENERGY AUDITS; *ENERGY CONSERVATION; *MANAGEMENT; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 66-67P.

ABSTRACT: NO-COST, LOW-COST, AND CAPITAL INTENSIVE IMPROVEMENTS CAN SAVE ENERGY AT WATER AND WASTEWATER TREATMENT PLANTS.

AVAILABILITY: PUBLIC WORKS V113 N9

IRIS ACCESSION NUMBER: EW008262

PUBLICATION DATE: SEP 82

TITLE: CARBON POLISHING BRINGS PLANT INTO COMPLIANCE.

DESCRIPTOR: *ACTIVATED CARBON; *EFFLUENTS; *OPERATIONS (WASTEWATER); *REGULATIONS; *WASTEWATER TREATMENT; *WATER QUALITY

ABSTRACT: AN ACTIVATED CARBON SYSTEM ENABLES AN AIR FORCE BASE TO COMPLY WITH FEDERAL DISCHARGE REQUIREMENTS FOR WASTEWATER EFFLUENTS.

AVAILABILITY: PUBLIC WORKS V113 N9

IRIS ACCESSION NUMBER: EW008263

PUBLICATION DATE: SEP 82

TITLE: COSTS OF PREVENTIVE MAINTENANCE PROGRAMS IN WASTEWATER COLLECTION SYSTEMS.

PERSONAL AUTHOR: LIEBESKINK, JUDITH; LAFOND, JOHN

DESCRIPTOR: *COSTS; *EQUIPMENT; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERSONNEL; PIPES; PUMPS; SEWERS; *PLANNING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 82-84P.

ABSTRACT: PRESENTED ARE AVERAGE COSTS FOR QUALITY PREVENTIVE MAINTENANCE PROGRAMS FOR WASTEWATER COLLECTION SYSTEMS FOR VARIOUS SIZE AGENCIES.

AVAILABILITY: PUBLIC WORKS V113 N9

IRIS ACCESSION NUMBER: EW008264

PUBLICATION DATE: SEP 82

TITLE: A SOLUTION TO TREATMENT PLANT MAINTENANCE CHORES.

PERSONAL AUTHOR: DRESCHER, JON W.

DESCRIPTOR: *DESIGN; *CONSTRUCTION; *FACILITIES; *JET-VACUUM MACHINES; *MAINTENANCE; *OHIO; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 90-91P.

ABSTRACT: DESCRIBED IS A MULTI-PURPOSE MACHINE THAT PERFORMS MANY CLEANING AND MAINTENANCE CHORES AT A WASTEWATER TREATMENT FACILITY.

AVAILABILITY: PUBLIC WORKS V113 N9

IRIS ACCESSION NUMBER: EW008265
PUBLICATION DATE: SEP 82

TITLE: A PAPER TIGER: THE SAFE DRINKING WATER ACT.

PERSONAL AUTHOR: ADAMS, ARTHUR H.; BURKE, THOMAS W.

DESCRIPTOR: *DRINKING WATER; *EPA; *FEDERAL ROLE; *LEGISLATION; *REGULATIONS; *SAFE DRINKING WATER ACT; *STATE ROLE; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 73-76P.

ABSTRACT: DESCRIBED IS THE SAFE DRINKING WATER ACT OF 1974. THE ACT HAS SURVIVED SCRUTINY, CONTROVERSY AND AMENDMENT. AS OF JUNE, 1982 THERE HAVE BEEN FIVE AMENDMENTS TO THE ACT. IMPACT OF THE ACT ARE DISCUSSED.

AVAILABILITY: CONSULTING ENGINEER V59 N3

IRIS ACCESSION NUMBER: EW008266

PUBLICATION DATE: SEP 82

TITLE: THE U.S.: RETHINKING FILTRATION 8 DISINFECTION.

PERSONAL AUTHOR: PRENDIVILLE, PAUL W.

DESCRIPTOR: *DRINKING WATER; *DISINFECTION; *FILTRATION; *OZONE; *PUBLIC HEALTH; *TECHNOLOGY; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 79-82P.

ABSTRACT: DRINKING WATER QUALITY MUST BE ADDRESSED FORCEFULLY-CURRENT TECHNOLOGY CAN PRODUCE WATERS THAT ARE SPARKLING PURE. USE OF FILTRATION, OZONE, AND OTHER TECHNIQUES CAN IMPROVE WATER QUALITY AND HEALTH.

AVAILABILITY: CONSULTING ENGINEER V59 N3

IRIS ACCESSION NUMBER: EW008267

PUBLICATION DATE: SEP 82

TITLE: THE CASE FOR EUROPE'S DISINFECTION PRACTICES.

PERSONAL AUTHOR: MORRIS, CARRELL J.

DESCRIPTOR: *ACTIVATED CARBON; *DISINFECTION; *DRINKING WATER; *EUROPE; *GRANULAR ACTIVATED CARBON; *OPERATIONS (WATER); *PUBLIC HEALTH; *TECHNOLOGY; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 85-88P.

ABSTRACT: DISCUSSED ARE DISINFECTION PRACTICES USED IN EUROPE. GRANULAR ACTIVATED CARBON AND MULTIPLE USE OF DISINFECTANTS ARE MORE WIDELY USED THERE.

AVAILABILITY: CONSULTING ENGINEER V59 N3

IRIS ACCESSION NUMBER: EW008268

PUBLICATION DATE: SEP 82

TITLE: SETTING EQUITABLE WATER RATES.

PERSONAL AUTHOR: KELLER, CHARLES W.

DESCRIPTOR: *CONSERVATION; *COSTS; *DRINKING WATER; *ECONOMICS; *RATES; *WATER RATES; *WATER SUPPLY

DESCRIPTIVE NOTE: 96-102P.

ABSTRACT: DISCUSSED ARE VARIABLES INFLUENCING WATER RATE STRUCTURES AND WATER RATES. DIFFERENT CLASSES OF USERS AND DIFFERENCES IN RATES ARE CONSIDERED.

AVAILABILITY: CONSULTING ENGINEER V59 N3

IRIS ACCESSION NUMBER: EW008269

PUBLICATION DATE: SEP 82

TITLE: ADVANCES IN WATER 8 WASTEWATER VALVES.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *TECHNOLOGY; *VALVES; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 105-109P.

ABSTRACT: DISCUSSED ARE VALVES USED IN WATER AND WASTEWATER OPERATIONS. IMPROVEMENTS IN VALVES HAVE RESULTED IN A NUMBER OF IMPROVEMENTS IN OPERATIONS. IMPROVEMENTS IN DESIGN AND STANDARDS WILL CONTINUE TO PROVIDE VALVES NEEDED IN THE FUTURE.

AVAILABILITY: CONSULTING ENGINEER V59 N3

IRIS ACCESSION NUMBER: EW008283

PUBLICATION DATE: 81

TITLE: THE BASIC CONVERSIONS HANDBOOK FOR APPLE, TR-80, AND PET USERS.

PERSONAL AUTHOR: BRAIN, DAVID A.; AND OTHERS

DESCRIPTOR: *BASIC LANGUAGE; *COMPUTER PROGRAMS; *COMPUTER SCIENCE; COMPUTERS; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; *PROGRAMMING LANGUAGES

DESCRIPTIVE NOTE: 80P. PRICE: $7.95

ABSTRACT: THE PURPOSE OF THIS HANDBOOK IS TO HELP TRANSLATE PROGRAMS INTO A VARIETY OF PROGRAMMING LANGUAGES. WITH THIS

GUIDE YOU CAN SELECT A PROGRAM IN ITS LISTED FORM AND TRANSLATE IT TO A PARTICULAR MACHINE. CHAPTERS INCLUDE: METHODS OF TRANSLATION, CONVERSION OF APPLE II AND PET PROGRAMS INTO TRS-80, CONVERSION OF TRS-80 AND PET PROGRAMS INTO APPLE II, AND CONVERSION OF TRS-80 AND APPLE II INTO PET. APPENDICES INCLUDE SUBROUTINES, SAMPLE PROGRAM CONVERSIONS, AND CHARTS FOR CONVERSION SPECIFICATIONS.

AVAILABILITY: HAYDEN PUBLISHING COMPANY, INC., P. O. BOX 302, ROCKVILLE PARK, NJ 07662

IRIS ACCESSION NUMBER: EW008284

PUBLICATION DATE: 81

TITLE: MODERN MANAGEMENT OF WATER AND WASTEWATER UTILITIES.

PERSONAL AUTHOR: KORBITZ, WILLIAM E.

DESCRIPTOR: FACILITIES; *INSTRUCTIONAL MATERIALS; MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *POST SECONDARY EDUCATION; *PLANNING; *TECHNOLOGY; *UTILITIES; *WASTEWATER TREATMENT; *WATER RESOURCES; *WATER TREATMENT

DESCRIPTIVE NOTE: 261P. PRICE: $32.50

ABSTRACT: THE PURPOSE OF THIS BOOK IS TO SERVE AS A COLLEGE TEXTBOOK AND AS A REFERENCE FOR UTILITY MANAGERS FOR PRACTICAL APPROACHES TO THE MANY PROBLEMS THAT CONFRONT THEM. CHAPTERS INCLUDE: MANAGEMENT RESPONSIBILITIES AND CONSTRAINTS; ORGANIZATIONAL CONSTRAINTS AND OPPORTUNITIES; FEDERAL AND STATE REGULATIONS; CAUSE AND EFFECT; TECHNOLOGY CONSTRAINTS IN DESIGN, OPERATIONS, AND MAINTENANCE; TOTAL WATER RESOURCES MANAGEMENT; PLANNING, PROGRAMMING, AND BUDGETING; RATES AND FINANCES; AUTOMATION, DATA PROCESSING, AND COMPUTER PROCESS CONTROL; LEGAL CONCERNS OF THE UTILITY MANAGER; PUBLIC RELATIONS; AND USE OF CONSULTANTS; CONTRACT ADMINISTRATION; SAFETY CONSIDERATIONS; CONSERVATION AND RESOURCE RECOVERY; AND, RESEARCH AND DEVELOPMENT.

AVAILABILITY: GARLAND PUBLISHING, INC., 136 MADISON AVENUE, NEW YORK, NY 10016

IRIS ACCESSION NUMBER: EW008285

PUBLICATION DATE: 82

TITLE: ABSTRACTS OF TECHNICAL PAPERS - 55TH ANNUAL CONFERENCE OF THE WATER POLLUTION CONTROL FEDERATION 1982.

DESCRIPTOR: *ABSTRACTS; CASE STUDIES; *CONFERENCE PROCEEDINGS; DESIGN; ENERGY CONSERVATION; EQUIPMENT; *FACILITIES; *GROUNDWATER; INDUSTRIAL WASTES; MANAGEMENT; *OPERATIONS (WASTEWATER); *POLLUTION CONTROL; *RESEARCH REPORTS; STANDARDS; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL FEDERATION; *WATER QUALITY

DESCRIPTIVE NOTE: PRICE: $5.00

ABSTRACT: THIS PUBLICATION CONTAINS ABSTRACTS OF TECHNICAL PAPERS PRESENTED AT THE 55TH ANNUAL CONFERENCE OF THE WATER POLLUTION CONTROL FEDERATION. A WIDE VARIETY OF TOPICS ARE ADDRESSED INCLUDING GROUNDWATER CONTAMINATION, WATER POLLUTION CONTROL IN SYNFUELS PRODUCTION, INDUSTRIAL WASTES, ENERGY CONSERVATION, LEGAL ISSUES, COLLECTION SYSTEMS, WATER QUALITY CRITERIA AND STANDARDS, PLANT OPERATIONS, MANAGEMENT, SLUDGE, HAZARDOUS WASTES, AND WASTEWATER REUSE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008286

TITLE: ORIENTATION TO NPDES PERMITS-COURSE NUMBER 164.7.

DESCRIPTOR: *EFFLUENTS; *INSTRUCTIONAL MATERIALS; *LEGISLATION; *NPDES; ORIENTATION PROGRAMS; *PERMITS; *POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; *REGULATIONS; STANDARDS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 209P. PRICE: $1.00 PLUS $0.03 PER PAGE.

ABSTRACT: THIS PUBLICATION IS A TRANSCRIPT FOR A PRESENTATION INTRODUCING THE NPDES PERMIT SYSTEM. TOPICS DISCUSSED INCLUDE: PUBLIC LAW 92-500, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM, STREAM CLASSIFICATION AND STANDARDS, PERMIT CONDITIONS, SELF-MONITORING PROGRAM, OPERATION AND MAINTENANCE OF WASTEWATER TREATMENT PLANTS, QUALITY CONTROL OF THE EFFLUENT, CONSTRUCTION GRANTS, COMPLIANCE MONITORING, TECHNICAL ASSISTANCE AND ENFORCEMENT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008287

TITLE: AN INTRODUCTION TO WEIBULL PROBABILITY PAPER.

PERSONAL AUTHOR: SANTNER, JOSEPH F.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *GRAPHICAL ANALYSIS; *PROBABILITY; *PROBABILITY PAPER; *STATISTICS; *WEIBULL PROBABILITY PAPER

DESCRIPTIVE NOTE: 30P. PRICE: $1.00 PLUS $0.03 PER PAGE.

ABSTRACT: THIS PAPER IS DESIGNED TO INTRODUCE GRAPHICAL ANALYSIS USING PROBABILITY PAPERS TO THOSE WHO HAVE NOT BEEN EXPOSED TO THIS TECHNIQUE. WEIBULL PAPER ANALYSIS HAS BEEN USED SUCCESSFULLY IN MANY APPLICATIONS INCLUDING RELIABILITY OF MOTORS, BRITTLE FRACTURE AND STRENGTH OF STEEL.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW008288
TITLE: AN INTRODUCTION TO GUMBEL, OR EXTREME-VALUE PROBABILITY PAPER.

PERSONAL AUTHOR: SANTNER, JOSEPH F.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DATA ANALYSIS; *GUMBEL PROBABILITY PAPER; *GRAPHICAL ANALYSIS; *INSTRUCTIONAL MATERIALS; *MATHEMATICAL APPLICATIONS; *POST SECONDARY EDUCATION; *PROBABILITY PAPER; *STATISTICS

DESCRIPTIVE NOTE: 34P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS PAPER EXAMINES AND DESCRIBES THE USE OF GUMBEL, OR EXTREME-VALUE, PROBABILITY PAPER AS A ROUGH AND RAPID GRAPHICAL HAND TOOL FOR THE ANALYSIS OF FREQUENCY TYPE DATA. THE MATHEMATICAL EQUATIONS SUPPORTING THIS ANALYTICAL TECHNIQUE ARE DESCRIBED IN DETAIL AS ARE ITS APPLICATIONS. EXAMPLE PLOTTING TABLES AND GRAPHS ARE PROVIDED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW008293

PUBLICATION DATE: 81

TITLE: DATA MANAGEMENT SYSTEMS FOR WATER RESOURCES PLANNING.

PERSONAL AUTHOR: DAVIS, DARRYL W.

DESCRIPTOR: ARMY CORPS OF ENGINEERS; CASE STUDIES; *DATA ANALYSIS; *DATA MANAGEMENT; ENGINEERING; *FEDERAL GOVERNMENT; HYDROLOGY; *MANAGEMENT; *MODELS; *PLANNING; *WATER RESOURCES

DESCRIPTIVE NOTE: 13P. PRICE CODE: PC A02/MF A01; AD-A114 650/5

ABSTRACT: WATER RESOURCES PLANNING AT THE FEDERAL LEVEL IS COMPREHENSIVE MULTI-PURPOSE MULTI-OBJECTIVE PLANNING. THE INCREASING COMPLEXITY OF ISSUES, PLANNING ALTERNATIVES, AND EVALUATION CRITERIA HAVE SPAWNED AN EVER GROWING NEED FOR INCREASED DATA AND ASSOCIATED ANALYSIS PROCEDURES. THE INCREASED NUMBER OF SUCH MODELS, BOTH DEMANDING AND GENERATING LARGE AMOUNTS OF DATA, HAVE STIMULATED AWARENESS OF THE NEED FOR PLANNING ORIENTED DATA MANAGEMENT SYSTEMS. THIS PAPER DESCRIBES RECENT ACTIVITIES OF THE CORPS OF ENGINEERS HYDROLOGIC ENGINEERING CENTER IN DATA MANAGEMENT FOR WATER RESOURCES PLANNING STUDIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008294
PUBLICATION DATE: MAR 82

TITLE: PRELIMINARY RESULTS OF THE NATIONWIDE URBAN RUNOFF PROGRAM. EXECUTIVE SUMMARY.

DESCRIPTOR: *COST EFFECTIVENESS; *GUIDELINES; *MANAGEMENT; *PLANNING; *PROGRAM DESCRIPTIONS; *RUNOFF; STORMWATER; *URBAN AREAS; *WATER QUALITY

DESCRIPTIVE NOTE: 20P. PRICE CODE: PC A06/MF A01; PB82-207986

ABSTRACT: AS A WATER QUALITY MANAGEMENT PLANNING EFFORT, THE PRIMARY NURP OBJECTIVE IS TO DEVELOP WATER QUALITY MANAGEMENT PLANS THAT WILL BE APPROPRIATE, ACCEPTABLE, AFFORDABLE, AND FOCUSED ON LOCAL NEEDS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008295

PUBLICATION DATE: MAR 82

TITLE: PRELIMINARY RESULTS OF THE NATIONWIDE URBAN RUNOFF PROGRAM. VOLUME I.

DESCRIPTOR: *COST EFFECTIVENESS; *MANAGEMENT; *NONPOINT SOURCE POLLUTION; *PLANNING; *PROGRAM DESCRIPTIONS; *RUNOFF; STORMWATER; *URBAN AREAS; *WATER QUALITY

DESCRIPTIVE NOTE: 116P. PRICE CODE: PC A06/MF A01; PB82-207994

ABSTRACT: THE POSSIBLE DELETERIOUS WATER QUALITY EFFECTS OF NON-POINT SOURCES IN GENERAL, AND URBAN RUNOFF IN PARTICULAR, WERE RECOGNIZED BY THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972. BECAUSE OF UNCERTAINTIES ABOUT THE TRUE SIGNIFICANCE OF URBAN RUNOFF AS A CONTRIBUTOR TO RECEIVING WATER QUALITY PROBLEMS, CONGRESS MADE TREATMENT OF SEPARATE STORMWATER DISCHARGES INELIGIBLE FOR FEDERAL FUNDING WHEN IT ENACTED THE CLEAN WATER ACT IN 1977. TO OBTAIN INFORMATION THAT WOULD HELP RESOLVE THESE UNCERTAINTIES, THE AGENCY ESTABLISHED THE NATIONWIDE URBAN RUNOFF PROGRAM IN 1978. THIS FIVE-YEAR PROGRAM IS INTENDED TO ANSWER QUESTIONS SUCH AS: TO WHAT EXTENT IS URBAN RUNOFF A CONTRIBUTOR TO WATER QUALITY PROBLEMS ACROSS THE NATION? WHAT IS THE EFFECTIVENESS OF CONTROLS SHORT OF TREATMENT IN REDUCING WATER QUALITY PROBLEMS WHERE THEY EXIST? ARE BEST MANAGEMENT PRACTICES FOR CONTROL OF URBAN RUNOFF COST EFFECTIVE IN COMPARISON TO ALTERNATIVE OPTIONS?

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008296

PUBLICATION DATE: MAR 82

TITLE: PRELIMINARY RESULTS OF THE NATIONWIDE URBAN RUNOFF PROGRAM. VOLUME II. APPENDICES.

DESCRIPTOR: *MANAGEMENT; *PLANNING; *POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; *RUNOFF; STORMWATER; *URBAN AREAS; *WATER QUALITY

DESCRIPTIVE NOTE: 621P. PRICE CODE: PC A09/MF A01; PB82-208000

ABSTRACT: THIS REPORT CONTAINS APPENDICES TO THE PRELIMINARY RESULTS OF THE NATIONWIDE URBAN RUNOFF PROGRAM. INCLUDED ARE: EARLY PERCEPTIONS, THE NATIONWIDE URBAN RUNOFF PROGRAM, URBAN RUNOFF PERSPECTIVES, WATER QUALITY CONCERNS, WATER QUALITY AND QUALITY CONTROL, URBAN RUNOFF POLLUTANT LOADS, WATER QUALITY EFFECTS, EVALUATION OF CONTROLS, QUALITY ASSURANCE AND QUALITY CONTROL, RECEIVING WATER EFFECTS, AND EVALUATION OF CONTROLS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008297

PUBLICATION DATE: 82

TITLE: U.S. WATER RESOURCES COUNCIL - PUBLICATION LIST.

DESCRIPTOR: *GUIDES; *INDEXES; *INFORMATION SOURCES; *PUBLICATIONS; *RESEARCH REPORTS; *RESOURCE MATERIALS; *WATER RESOURCES COUNCIL; *WATER RESOURCES

DESCRIPTIVE NOTE: 31P. PRICE CODE: PC A03/MF A01; PB82-208596

ABSTRACT: BECAUSE OF FREQUENT REQUESTS FOR RECENT PUBLICATIONS NO LONGER IN SUPPLY AT THE WATER RESOURCES COUNCIL (WRC), THIS LIST WAS PREPARED TO PROVIDE INFORMATION ON WHERE AND HOW WRC STUDIES OR REPORTS CAN BE OBTAINED. BECAUSE OF THE PLANNED TERMINATION OF THE AGENCY, WRC DID NOT STOCK COPIES OF RECENT REPORTS AND MOST SUPPLIES OF EARLIER REPORTS HAVE BEEN EXHAUSTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008298

PUBLICATION DATE: MAR 82

TITLE: SOCIOECONOMIC IMPACTS OF WATER QUALITY STRATEGIES.

PERSONAL AUTHOR: MCMAHON, ROBERT F.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ASSESSMENT; ECONOMIC FACTORS; ENGINEERING; *FACILITIES; *GUIDELINES; *MANAGEMENT; *PLANNING; SOCIAL FACTORS; *SOCIOECONOMIC IMPACTS; *WATER QUALITY

DESCRIPTIVE NOTE: 436P. PRICE CODE: PC A19/MF A01; PB82-222894

ABSTRACT: THIS PUBLICATION PROVIDES IN ONE PLACE COMPREHENSIVE GUIDANCE ON SOCIOECONOMIC ASSESSMENT FOR PLANNERS AND ENGINEERS INVOLVED IN AREAWIDE WATER QUALITY OR FACILITIES PLANNING. IT PROVIDES A SET OF METHODS AND TECHNIQUES FOR CONSIDERING SOCIOECONOMIC IMPACTS IN THE WATER QUALITY PLANNING PROCESS. PART 1 PRESENTS A PROTOTYPICAL SOCIOECONOMIC IMPACT ASSESSMENT PROCESS AND GUIDELINES FOR INTEGRATING IT INTO THE OVERALL WATER QUALITY PLANNING PROCESS. FOUR ASSESSMENT ACTIVITIES ARE DISCUSSED IN THE CONTEXT OF WATER QUALITY MANAGEMENT PLANNING. PART 2 CONSIDERS TECHNIQUES FOR ESTIMATING THE IMPACTS OF WATER QUALITY CONTROLS FOR THE ABOVE IMPACT CATEGORIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008299

PUBLICATION DATE: MAR 82

TITLE: FILTRATION PERFORMANCE IN WATER AND WASTEWATER TREATMENT: THEORY AND MEASUREMENT.

PERSONAL AUTHOR: TOBIASON, JOHN E.; O'MELIA, CHARLES R.

DESCRIPTOR: EFFLUENTS; *EQUIPMENT; *FILTERS; *FILTRATION; MANAGEMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 126P. PRICE CODE: PC A07/MF A01; PB82-224627

ABSTRACT: AN EARLIER MODEL FOR FILTER RIPENING, DESIGNED TO PREDICT CHANGES IN EFFLUENT QUALITY AND HEAD LOSS WITH TIME AS FILTRATION PROCEEDS, WAS EXTENDED AND APPLIED. REASONABLE AGREEMENT WAS FOUND BETWEEN OBSERVED AND PREDICTED FILTRATE QUALITY. HEAD LOSS PREDICTIONS ARE QUANTITATIVELY SIMILAR TO OBSERVATIONS BUT ARE GENERALLY LOWER. SUSPENSIONS CONTAINING SMALL PARTICLES PRODUCE MORE HEAD LOSS THAN SUSPENSIONS OF LARGER PARTICLES WHEN THE COMPARISON IS BASED ON EQUIVALENT MASSES OF SOLIDS REMOVED BY THE FILTERS. PARTICLES SMALLER THAN A FEW MICRONS IN SIZE ARE PARTICULARLY TROUBLESOME IN THIS REGARD. THIS INDICATES THAT FLOCCULATION PRIOR TO FILTRATION IS IMPORTANT WHEN DIRECT FILTRATION IS CONSIDERED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008300

PUBLICATION DATE: SEP 81

TITLE: WATER QUALITY PLANNING IN THE NORTHEAST AND MIDWEST: THE SECTION 208 EXPERIENCE.

PERSONAL AUTHOR: GOLDROSEN, JOHN J.; MCMAHON, GAYLE C.

DESCRIPTOR: *CASE STUDIES; *ECONOMIC FACTORS; *LEGAL FACTORS; MANAGEMENT; *PLANNING; *PROGRAM DESCRIPTIONS; *SECTION 208; *URBAN AREAS; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 222P. PRICE CODE: PC A10/MF A01; PB82-224908

ABSTRACT: EXAMINATION IS MADE OF INSTITUTIONAL OBSTACLES TO WATER QUALITY PLANNING FOR URBANIZING AREAS, BASED ON THE EXPERIENCES OF SECTION 208 PLANNING PROGRAMS CONDUCTED IN FIFTEEN STATES OF THE NORTHEAST AND MIDWEST U.S. THE FOCUS IS ON THE INSTITUTIONAL, RATHER THAN THE TECHNICAL, OBSTACLES TO PLAN IMPLEMENTATION. THESE OBSTACLES INCLUDE INADEQUATE RECOGNITION OF WATER QUALITY PROBLEMS, DIFFICULTY IN FINANCING IDENTIFIED SOLUTIONS, INSUFFICIENT LEGAL OR REGULATORY AUTHORITY, LOCAL RESISTANCE TO WATER QUALITY PLANNING, LACK OF COOPERATION AMONG LOCAL POLITICAL UNITS, AND LACK OF COOPERATION AMONG DIFFERENT GOVERNMENT LEVELS. MOST OF THE INFORMATION USED WAS OBTAINED THROUGH DIRECT CONTACT WITH INDIVIDUALS INVOLVED IN PREPARING THE SECTION 208 PLANS, WITH NINE OF THE PROGRAMS SELECTED FOR ON-SITE VISITS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008301

PUBLICATION DATE: MAR 82

TITLE: EVALUATION AND DOCUMENTATION OF MECHANICAL RELIABILITY OF CONVENTIONAL WASTEWATER TREATMENT PLANT COMPONENTS.

PERSONAL AUTHOR: SHULTZ, DAVID W.; PARR, VAN B.

DESCRIPTOR: *COMPRESSORS; *CONTROLS; *EQUIPMENT; *FACILITIES; *INSTRUMENTATION; *MAINTENANCE; *MOTORS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *POWER TRANSMISSIONS; *PUMPS; *RESEARCH REPORTS; *VALVES; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 238P. PRICE CODE: PC A11/MF A01; PB82-227539

ABSTRACT: THIS STUDY WAS INITIATED TO DETERMINE THE IN-SERVICE RELIABILITY, MAINTAINABILITY AND AVAILABILITY OF SELECTED CRITICAL WASTEWATER TREATMENT PLANT COMPONENTS. COMPONENTS WERE CONSIDERED CRITICAL IF THEIR FAILURE CAUSED AN IMMEDIATE IMPACT ON EFFLUENT QUALITY. TREATMENT PLANT COMPONENTS SELECTED INCLUDED PUMPS, POWER TRANSMISSIONS, MOTORS, COMPRESSORS, VALVES, AND CONTROLS. COMPONENTS WERE THOSE FROM FOUR TYPES OF WASTEWATER TREATMENT PLANTS. THE FOUR TYPES OF PLANTS WERE AIR ACTIVATED SLUDGE, OXYGEN ACTIVATED SLUDGE, TRICKLING FILTER, AND ROTATING BIOLOGICAL CONTACTOR (RBC). OPERATION AND MAINTENANCE DATA OBTAINED FROM NINE OPERATING PLANTS WERE USED TO ESTIMATE FAILURE RATES, MEAN-TIME-BETWEEN-FAILURES, MEAN-TIME-TO-REPAIR, AND AVAILABILITY FOR EACH COMPONENT. THESE PERFORMANCE STATISTICS ARE BY COMPONENT TYPE, SIZE RANGE, AND APPLICATION. PERFORMANCE STATISTICS WERE CALCULATED FROM OPERATING DATA FOR 119 PUMPS, 249 POWER TRANSMISSIONS, 285 MOTORS, 17 COMPRESSORS, 13 VALVES, AND 269 CONTROLS. CALCULATED PERFORMANCE STATISTICS CAN BE UTILIZED BY DESIGN ENGINEERS AND PLANT OPERATORS TO ASSIST IN THE SELECTION OF NEW EQUIPMENT. THE DEVELOPMENT OF A PERFORMANCE DATA BASE AND SUBSEQUENT PROPER UTILIZATION OF THE DATA SHOULD RESULT IN IMPROVEMENTS IN TREATMENT PLANT PERFORMANCE. THESE DATA ALLOW ESTIMATES TO BE MADE OF PERFORMANCE TO BE EXPECTED FROM CERTAIN EQUIPMENT IN CERTAIN APPLICATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008302

PUBLICATION DATE: FEB 82

TITLE: TECHNOLOGY ASSESSMENT OF ANAEROBIC SYSTEMS FOR MUNICIPAL WASTEWATER TREATMENT: 1. ANAEROBIC FLUIDIZED BED. 2. ANFLOW.

PERSONAL AUTHOR: HEIDMAN, JAMES A.

DESCRIPTOR: *ANAEROBIC FLUIDIZED BEDS; *ANAEROBIC TREATMENT; *COST EFFECTIVENEESS; EQUIPMENT; *FACILITIES; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 59P. PRICE CODE: PC A04/MF A01; PB82-229170

ABSTRACT: THIS REPORT DISCUSSES TWO DEVELOPING TECHNOLOGIES FOR THE TREATMENT OF MUNICIPAL WASTEWATERS. THESE TECHNOLOGIES ARE ANAEROBIC FLUIDIZED BED SYSTEMS AND AN ANAEROBIC FIXED-FILM BIOREACTOR (ANFLOW). THE REPORT DISCUSSES: AVAILABLE LABORATORY DATA ON SYSTEM PERFORMANCE; FLUIDIZED BED EXPANSION AND VOIDAGE-VELOCITY RELATIONSHIPS; THE INFLUENCE OF BACTERIAL GROWTH ON CHANGES IN FLUIDIZATION CHARACTERISTICS; POWER REQUIREMENTS FOR FLUIDIZATION; POTENTIAL COST AND ENERGY SAVINGS COMPARED TO ACTIVATED SLUDGE SECONDARY TREATMENT PLANTS; AND PROVIDES ESTIMATES OF ANAEROBIC FLUIDIZED BED TREATMENT COSTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008303

PUBLICATION DATE: FEB 82

TITLE: TECHNOLOGY ASSESSMENT OF SOLAR THERMAL ENERGY

APPLICATIONS IN WASTEWATER TREATMENT.
DESCRIPTOR: *ANAEROBIC DIGESTERS; *COST EFFECTIVENESS; *ENERGY; *ENERGY CONSERVATION; *EQUIPMENT; *FACILITIES; *PERFORMANCE EVALUATION; POTW; *SOLAR ENERGY; SLUDGE DRYING; *TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT; WATER HEATING

DESCRIPTIVE NOTE: 112P. PRICE CODE: PC A06/MF A01; PB82-229790

ABSTRACT: THREE MAJOR AREAS WERE IDENTIFIED FOR WHICH SOLAR THERMAL ENERGY USAGE HAS POTENTIAL APPLICABILITY IN PUBLICLY OWNED TREATMENT WORKS. THESE AREAS INCLUDE SPACE AND DOMESTIC WATER HEATING, ANAEROBIC DIGESTER HEATING, AND SLUDGE DRYING. THE REPORT CONTAINS A DETAILED ANALYSIS OF SOLAR HEATING OF ANAEROBIC DIGESTERS UTILIZING AN ACTIVE SOLAR ENERGY (FLAT-PLATE COLLECTOR) SYSTEM. A PRESENT WORTH COST-EFFECTIVENESS ANALYSIS WAS PERFORMED WHEREBY THE PRESENT WORTH OF THE ANAEROBIC DIGESTER GAS CONSERVED WAS COMPARED TO THE PRESENT WORTH OF THE SOLAR ENERGY COLLECTION SYSTEM. BASED ON THE ANALYSIS, SOLAR-AIDED ANAEROBIC DIGESTER HEATING PROVED UNECONOMICAL AT ALL LOCATIONS WITHIN THE UNITED STATES. A SENSITIVITY ANALYSIS WAS PERFORMED TO DETERMINE WHICH VARIABLE HAS THE GREATEST EFFECT ON THE COST ANALYSIS. VARIABLES CONSIDERED INCLUDED COLLECTOR SYSTEM PRICE PER UNIT AREA, ANNUAL OPERATIONS AND MAINTENANCE COST, FUEL ESCALATION COST FACTOR, AND PERCENT SOLIDS IN DIGESTER FEED. THE ANALYSIS INDICATED THAT THE COLLECTOR SYSTEM COST WAS THE MOST SENSITIVE ITEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008304

PUBLICATION DATE: JUN 82

TITLE: GROUND WATER POLLUTION. 1964-FEBRUARY, 1982 (CITATIONS FROM THE AMERICAN PETROLEUM INSTITUTE DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *CONTAMINATION; *GROUNDWATER; HYDROLOGY; *PETROCHEMICALS; *PETROLEUM; POLLUTION CONTROL; *RESEARCH REPORTS; *WATER POLLUTION; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 257P. PRICE CODE: PC N01/MF N01; PB82-869484

ABSTRACT: THE BIBLIOGRAPHY CONTAINS ABSTRACTS OF WORLDWIDE RESEARCH ON THE CONTAMINATION OF GROUND WATER, ESPECIALLY FROM PETROLEUM AND PETROCHEMICAL SOURCES. CAUSES, PHENOMENA, PREVENTION, CONTROL, AND ANALYSIS ARE AMONG THE SUBJECTS COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 208 CITATIONS, 21 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008306
PUBLICATION DATE: JUL 82

TITLE: OIL SPILLS. BIOLOGICAL EFFECTS. JUNE, 1981-JUNE, 1982 (CITATIONS FROM THE AMERICAN PETROLEUM INSTITUTE DATA BASE.)

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *BIOLOGY; *ECOLOGICAL FACTORS; *ENVIRONMENTAL IMPACTS; *MICROBIOLOGY; *OIL RESIDUES; *OIL SPILLS; *RESEARCH REPORTS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 61P. PRICE CODE: PC N01/MF N01; PB82-810078

ABSTRACT: THE SELECTED ABSTRACTS COVER ASPECTS OF THE BIOLOGICAL AND ECOLOGICAL EFFECTS OF OIL SPILLS IN SALT AND FRESH WATER. THE EFFECTS ON MICROORGANISMS, PLANTS, AND ANIMALS ARE REPORTED, ALONG WITH RESEARCH ON THE RESIDUES AND METABOLIC PRODUCTS OF VARIOUS OIL COMPONENTS. THIS UPDATED BIBLIOGRAPHY CONTAINS 55 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008307

PUBLICATION DATE: JUL 82

TITLE: POLYELECTROLYTES: WASTEWATER AND SEWAGE TREATMENT. 1977-JULY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; COAGULATION; DESALINATION; FLOCCULATION; HEALTH EFFECTS; PERFORMANCE EVALUATION; POLLUTANTS; *POLYELECTROLYTES; *RESEARCH REPORTS; *SEPARATION TECHNIQUES; *SEWAGE TREATMENT; SLUDGE; *WASTEWATER TREATMENT; WATER POLLUTION; *WATER TREATMENT

DESCRIPTIVE NOTE: 152P. PRICE CODE: PC N01/MF N01; PB82-869488

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING POLYELECTROLYTES IN WASTEWATER AND WATER TREATMENT. TOPICS INCLUDE FLOCCULATION, COAGULATION, SEPARATION TECHNIQUES, POLLUTANT IDENTIFICATION, WATER POLLUTION SOURCES, SLUDGE DEHYDRATION, REMOVAL OF COLOR AND SOLID SUSPENSIONS, AND DESALINATION PROCESSES. VIRUS DETECTION AND REMOVAL, HOSPITAL WASTEWATER PROCESSING, METHODS OF SYNTHESIZING POLYELECTROLYTE COMPLEXES, AND PERFORMANCE EVALUATION OF POLYELECTROLYTES ARE DISCUSSED. (CONTAINS 110 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008308
PUBLICATION DATE: JUL 82

TITLE: WATER CHEMISTRY: ANALYSIS FOR HEAVY METALS. 1977-JULY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *CHEMISTRY; CONTAMINATION; ECOLOGICAL FACTORS; *HEAVY METALS; *METALS; *RESEARCH REPORTS; *WATER CHEMISTRY; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 244P. PRICE CODE: PC N01/MF N01; PB82-870049

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING WATER QUALITY PARAMETERS OF ON-STREAM AND OFF-STREAM SITES WITH SPECIFIC REFERENCE TO HEAVY METAL CONTAMINATION. METHODS FOR INDIVIDUAL AND SIMULTANEOUS MULTIELEMENT DETERMINATIONS ARE DISCUSSED. INTERFERENCE EFFECTS AND METHODS TO MINIMIZE THESE EFFECTS ARE CONSIDERED. THE ECOLOGICAL CONSEQUENCES OF HEAVY METAL CONTAMINATION ARE ALSO PRESENTED. (CONTAINS 172 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008309

PUBLICATION DATE: JUL 82

TITLE: DETERGENTS: EFFECTS ON WATER QUALITY. 1977-JULY, 1982. (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *DETERGENTS; EUTROPHICATION; *PHOSPHATES; *POLLUTION CONTROL; *RESEARCH REPORTS; SURFACTANTS; TECHNOLOGY; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 245P. PRICE CODE: PC N01/MF N01; PB82-807460

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING DETERGENTS AND THEIR LONG-TERM EFFECTS ON WATER QUALITY. THE RELATIONSHIP BETWEEN PHOSPHATES AND LAKE EUTROPHICATION IS DISCUSSED AND THE TECHNOLOGY TO REMOVE THEM IS ALSO MENTIONED. PHOSPHATE ALTERNATIVES ARE DISCUSSED, AND THEIR ADVANTAGES AND DISADVANTAGES ARE CONSIDERED. DETERGENT SURFACTANTS ARE ALSO DISCUSSED. (CONTAINS 171 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008310
PUBLICATION DATE: MAR 82

TITLE: INNOVATION IN THE WATER TREATMENT FIELD AND SYSTEMS APPROPRIATE AND AFFORDABLE FOR SMALLER COMMUNITIES.

PERSONAL AUTHOR: KROFTA, MILOS; WANG, LAWRENCE K.

DESCRIPTOR: *CASE STUDIES; *COST EFFECTIVENESS; *DRINKING WATER; *ECONOMIC FACTORS; EQUIPMENT; *FACILITIES; FLOTATION; *TECHNOLOGICAL ADVANCEMENTS; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 37P. PRICE CODE: PC A03/MF A01; PB82-201476

ABSTRACT: DR. KROFTA TESTIFIED THAT RIGID EPA EQUIPMENT SPECIFICATIONS IMPEDE THE INTRODUCTION OF NEW TREATMENT TECHNIQUES AND INHIBIT COMPETITION. THE RESULT IS UNNECESSARILY HIGH CAPITAL COSTS. DR. KROFTA USED THE CITY OF PITTSFIELD, MA, TO ILLUSTRATE THE POINT. A 25 MGD CONVENTIONAL WATER TREATMENT PLANT FOR PITTSFIELD'S 50,000 RESIDENTS WOULD COST OVER $25 MILLION; THE SAME SIZE TREATMENT FACILITY USING FLOTATION TECHNOLOGY, DEVELOPED TWO DECADES AGO IN EUROPE BUT CONSIDERED INNOVATIVE IN THE U.S. WOULD COST ABOUT $5 MILLION. DR. WANG EXPLAINED THAT BY USING THE FLOTATION TECHNOLOGY EVEN SMALLER COMMUNITIES COULD AFFORD BETTER QUALITY DRINKING WATER. AT A PILOT PLANT STUDY IN LENOX, MA, THE FLOTATION PROCESS REMOVED ABOUT 99.7 PERCENT OF THE CHLOROFORM, LEAD AND HUMIC ACID IN THE WATER AT A FRACTION OF THE COST OF A CONVENTIONAL SYSTEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008311

PUBLICATION DATE: MAY 82

TITLE: WASTEWATER TREATMENT: CHEMICAL INDUSTRY. 1970-MAY, 1982 (CITATIONS FROM POLLUTION ABSTRACTS.)

DESCRIPTOR: *BIBLIOGRAPHIES; BIOLOGICAL TREATMENT; *CHEMICALS; *CHEMICAL INDUSTRY; FERTILIZERS; *INDUSTRIAL WASTES; MERCURY; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; PESTICIDES; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 167P. PRICE CODE: PC N01/MF N01; PB82-866161

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING WASTEWATER TREATMENT IN THE CHEMICAL INDUSTRY RELATIVE TO A WIDE VARIETY OF INDUSTRIAL POLLUTANTS. BIOLOGICAL TREATMENTS, INCLUDING CARBON ADDITIVES, ARE DESCRIBED RELATIVE TO EFFECTIVENESS. THE REMOVAL OF MERCURY AND ITS COMPOUNDS ARE INCLUDED, AS WELL AS ASSOCIATED PROBLEMS AND RECOMMENDATIONS FROM FERTILIZER AND PESTICIDE POLLUTION. (THIS UPDATED BIBLIOGRAPHY CONTAINS 190 CITATIONS. 74 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285

PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008312

PUBLICATION DATE: MAY 82

TITLE: AQUATIC WEED CONTROL: WATER HYACINTH. 1977-MAY, 1982. (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *AQUATIC WEEDS; *BIBLIOGRAPHIES; *BIOLOGICAL TREATMENT; EQUIPMENT; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER HYACINTH

DESCRIPTIVE NOTE: 168P. PRICE CODE: PC N01/MF N01; PB82-866294

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE USE OF WATER HYACINTH IN WASTE WATER TREATMENT FACILITIES AND THE MECHANICAL AND BIOLOGICAL CONTROL OF THESE AQUATIC PLANTS. THE USE AND EFFECTIVENESS OF WATER HYACINTHS FOR WASTE WATER TREATMENT SYSTEMS AND THE BIOLOGICAL MECHANISMS THAT MAKE THEM EFFECTIVE ARE DISCUSSED. THE USE OF WATER HYACINTH DIGESTED BIOMASS TO PRODUCE FUEL AND FOOD IS ALSO CONSIDERED. EQUIPMENT TO MECHANICALLY CONTROL THE WATER HYACINTH POPULATION IS DISCUSSED AS ARE METHODS TO CHEMICALLY AND BIOLOGICALLY CONTROL THEIR GROWTH. (CONTAINS 115 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008313

PUBLICATION DATE: MAY 82

TITLE: WATER RESOURCES PLANNING. 1977-MAY, 1982. (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *CASE STUDIES; *FEDERAL GOVERNMENT; *FORECASTING; *LAWS; LOCAL GOVERNMENT; *PLANNING; POLLUTION CONTROL; *RESEARCH REPORTS; *URBAN AREAS; *WATER QUALITY; *WATER RESOURCES; WATER USE

DESCRIPTIVE NOTE: 153P. PRICE CODE: PC N01/MF N01; PB82-866518

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE GOALS AND OBJECTIVES OF WATER RESOURCES PLANNING, INCLUDING BOTH FEDERAL AND LOCAL GOVERNMENT LAWS AND PLANNING. SPECIFIC CASE STUDIES, INCLUDING WATER POLLUTION CONTROL, ARE DISCUSSED. TECHNOLOGICAL FORECASTING METHODS, WATER USE, AND THE ROLE OF URBANIZATION IN WATER RESOURCE PLANNING ARE ALSO CONSIDERED. (CONTAINS 98 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008314
PUBLICATION DATE: MAY 82

TITLE: COMMERCIAL SHELLFISH INDUSTRY: WATER POLLUTION EFFECTS. 1977-MAY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: BACTERIA; *BIBLIOGRAPHIES; HEAVY METALS; MONITORING; OIL; *POLLUTION CONTROL; *RESEARCH REPORTS; *SHELLFISH; *SHELLFISH INDUSTRY; THERMAL POLLUTION; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 231P. PRICE CODE: PC N01/MF N01; PB82-866914

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TYPES OF POLLUTANTS AND THE EFFECTS ON THE SHELLFISH INDUSTRY. A WIDE RANGE OF AGENTS, INCLUDING BACTERIA, HEAVY METALS, OIL, AND THERMAL POLLUTANTS ARE CONSIDERED. METHODS FOR MONITORING THESE AGENTS, THEIR EFFECTS ON THE SURVIVAL OF SHELLFISH, AND THEIR EFFECTS ON HUMAN CONSUMERS ARE DISCUSSED. (CONTAINS 170 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008315

PUBLICATION DATE: MAY 82

TITLE: SYNTHETIC HYDROLOGY. 1977-MAY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; FLOODS; *HYDROLOGY; *MANAGEMENT; *MODELS; *PLANNING; *RESEARCH REPORTS; RIVER BASINS; RUNOFF; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 179P. PRICE CODE: PC N01/MF N01; PB82-866997

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING SIMULATION MODELS FOR WATER RESOURCE PLANNING AND EVALUATING WATER SUPPLY MANAGEMENT. THE STUDY OF SEASONAL RAINFALL, WATER RUNOFF, THE PERFORMANCE OF RIVER BASINS, AND FLOOD FREQUENCY ANALYSIS ARE AMONG THE TOPICS DISCUSSED. GAUSSIAN AND NONGAUSSIAN MODELS TO SIMULATE HYDROLOGIC PROCESSES ARE CONSIDERED. (CONTAINS 134 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008316

PUBLICATION DATE: MAY 82

TITLE: WASTEWATER TREATMENT: CATION EXCHANGE. 1977-MAY 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS

DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *CATION EXCHANGE; CHROMATOGRAPHY; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; RESINS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 214P. PRICE CODE: PC N01/MF N01; PB82-867359

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE THEORY, METHODS, AND APPLICATION OF CATION EXCHANGE FOR WASTEWATER TREATMENT. CATION EXCHANGE RESINS AND MEMBRANES ARE DISCUSSED, AND METHODS FOR CATION ANALYSIS USING CHROMATOGRAPHIC TECHNIQUES ARE CONSIDERED. (CONTAINS 154 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008317

PUBLICATION DATE: 81

TITLE: MANUAL FOR WATER RENOVATION AND RECLAMATION (SECOND EDITION.)

DESCRIPTOR: *CASE STUDIES; *DESIGN; *ENGINEERING; *MANUALS; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER RECLAMATION

DESCRIPTIVE NOTE: 335P. PRICE CODE: PC A15/MF A01; PB82-207093

ABSTRACT: THE AIM OF THIS MANUAL IS THE DISSEMINATION OF INFORMATION USEFUL TO DESIGN ENGINEERS, RESEARCHERS AND ORGANIZATIONS CONCERNED WITH THE RECLAMATION OF WATER FROM WASTEWATER. THE VARIOUS TREATMENT PROCESSES, SUCH AS CLARIFICATION, AMMONIA STRIPPING, SOFTENING, QUALITY EQUALIZATION, STABILIZATION, FILTRATION, ACTIVE CARBON ADSORPTION AND REGENERATION, SLUDGE HANDLING, CHLORINATION AND OZONATION, ARE DISCUSSED IN DETAIL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008318

PUBLICATION DATE: MAY 82

TITLE: SEWAGE FILTRATION. 1979-MARCH, 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; BIOLOGICAL OXYGEN DEMAND; EQUIPMENT; *FILTERS; FLOCCULATION; NITROGEN; *OPERATIONS (WASTEWATER); PHOSPHOROUS; PROCESS DESCRIPTION; *RESEARCH REPORTS; *SEWAGE FILTRATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 123P. PRICE CODE: PC N01/MF N01; PB82-807801

ABSTRACT: REPORTS ON SEWAGE FILTRATION FROM WORLDWIDE JOURNAL LITERATURE ARE CITED IN THIS BIBLIOGRAPHY. STUDIES INCLUDE TRICKLING FILTERS, SAND FILTERS, CENTRIFUGAL FILTERS, AND VACUUM FILTERS. ADDITIVES, FLOCCULATION, NITROGEN, PHOSPHORUS, BOD, AND BIOLOGICAL PROCESSES IN FILTRATION ARE ALSO COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 116 CITATIONS, 47 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008319

PUBLICATION DATE: MAY 82

TITLE: SEWAGE FILTRATION. 1979-MARCH, 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *COSTS; *EQUIPMENT; *FILTERS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SEWAGE FILTRATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 118P. PRICE CODE: PC N01/MF N01; PB82-807819

ABSTRACT: CITATIONS OF FEDERALLY-FUNDED RESEARCH ARE PRESENTED RELATIVE TO STUDIES ON CENTRIFUGAL FILTRATION, TRICKLING FILTERS, SAND FILTERS, MICROSTRAINERS, AND VACUUM FILTERS. COSTS AND PERFORMANCE EVALUATION AS RELATED TO FILTRATION ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 111 CITATIONS, 28 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008320

PUBLICATION DATE: MAY 82

TITLE: POLLUTION AND ITS CONTROL IN THE PAPER AND PULP INDUSTRY. 1978-APRIL, 1982 (CITATIONS FROM THE ENGEERING INDEX DATA BASE.)

DESCRIPTOR: *AIR POLLUTION; AIR QUALITY; *BIBLIOGRAPHIES; COSTS; ECONOMIC FACTORS; EFFLUENTS; ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *PAPER INDUSTRY; *POLLUTION CONTROL; *PULP INDUSTRY; *RESEARCH REPORTS; SOCIOECONOMIC FACTORS; *SOLID WASTES; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 270P. PRICE CODE: PC N01/MF N01; PB82-808049

ABSTRACT: THE CITED REPORTS FROM A WORLDWIDE LITERATURE SURVEY DISCUSS AIR, WATER, AND SOLID WASTE POLLUTION FROM THE PULP AND PAPER INDUSTRY. ECONOMICS, WAYS TO RECYCLE EFFLUENTS, COST ESTIMATES, TYPES OF WASTE, DETECTION, SOCIOECONOMIC FACTORS, AND THE EFFECTS OF THE POLLUTION ON THE ENVIRONMENT ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY

CONTAINS 2[illegible] CITATIONS, [illegible] OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008321

PUBLICATION DATE: MAY 82

TITLE: OIL WATER SEPARATORS. 1964-FEBRUARY, 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *EQUIPMENT; FILTERS; OIL RECOVERY; *OIL SPILLS; *OIL-WATER SEPARATORS; PERFORMANCE EVALUATION; *POLLUTION CONTROL; *RESEARCH REPORTS; SKIMMERS; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 170P. PRICE CODE: PC N01/MF N01; PB82-808148

ABSTRACT: THE CITATIONS COVER FEDERALLY-SPONSORED RESEARCH ON THESE DEVICES, PRIMARILY FOR OIL POLLUTION CONTROL. CENTRIFUGE SEPARATORS, COALESCERS, FILTERS, AND SKIMMERS ARE INCLUDED. OIL RECOVERY FROM OIL SPILLS, AND SEPARATION FROM BALLAST AND BILGE WATER ARE ALSO CITED. THE OPERATION, TESTING, AND PERFORMANCE OF THIS EQUIPMENT IN THE LABORATORY AND IN THE FIELD ARE REPORTED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 163 CITATIONS, 7 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008323

PUBLICATION DATE: MAY 82

TITLE: ACID MINE DRAINAGE. 1977-MAY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ACID MINE DRAINAGE; AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; HEAVY METALS; LAKES; *MINING; *POLLUTION CONTROL; *RESEARCH REPORTS; RIVERS; STREAMS; *WATER POLLUTION CONTROL; *WASTE TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 250P. PRICE CODE: PC N01/MF N01; PB82-865908

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE CONTROL AND TREATMENT OF ACID MINE DRAINAGE. TECHNIQUES DISCUSSED FOR TREATING WASTES WITH HEAVY METALS INCLUDED PRECIPITATION, CEMENTATION, ION EXCHANGE, CHARGED MEMBRANE, ULTRAFILTRATION, OZONATION, SOLVENT EXTRACTION, AND ELECTRODIALYSIS. THE ENVIRONMENTAL IMPACT OF ACID MINE DRAINAGE ON RIVERS, STREAMS AND LAKES IS ALSO INCLUDED. (CONTAINS 169 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008324

PUBLICATION DATE: MAY 82

TITLE: AQUATIC BACTERIA: THEIR INFLUENCE ON THE AQUATIC ENVIRONMENT. 1977-MAY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *AQUATIC BACTERIA; *AQUATIC ENVIRONMENT; BACTERIA; *BIBLIOGRAPHIES; *BIODEGRADATION; *MONITORING; *NITROGEN FIXATION; *PATHOGENS; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 179P. PRICE CODE: PC N01/MF N01; PB82-865932

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING AQUATIC BACTERIA AND THEIR INFLUENCE ON THE AQUATIC ENVIRONMENT. SAPROPHYTIC AND PATHOGENIC BACTERIA, INCLUDING COLIFORMS, ARE CONSIDERED. THE ROLE OF BACTERIA IN N2 FIXATION, THE BIODEGRADATION OF HERBICIDES, INCLUDING 2-4 D, AND THE BIODEGRADATION OF CRUDE OIL ARE DISCUSSED. METHODS TO MONITOR COLIFORM COUNTS ARE ALSO DISCUSSED. (CONTAINS 118 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008325

PUBLICATION DATE: MAY 82

TITLE: OIL SPILLS: LEGAL ASPECTS. 1977-MAY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ATTITUDES; *BIBLIOGRAPHIES; INDUSTRY; *LEGAL ASPECTS; *LEGISLATION; *OIL SPILLS; POLITICS; *PROBLEM SOLVING; *RESEARCH REPORTS; *SOCIAL FACTORS; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 165P. PRICE CODE: PC N01/MF N01; PB82-866203

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE LEGAL ASPECTS OF OIL SPILLS. TOPICS INCLUDE GENERAL PERSPECTIVES ON OIL SPILLS, EPA'S RESPONSE TO OIL SPILLS, LEGAL AND CORPORATE RESPONSE TO OIL SPILLS, PUBLIC INTEREST GROUPS' ATTITUDES ON OIL SPILLS, AND ECONOMIC AND POLITICAL APPROACHES TO THE PROBLEMS CAUSED BY OIL SPILLS. FEDERAL, STATE AND LOCAL LEGISLATION DEALING WITH THESE PROBLEMS ARE EMPHASIZED. (CONTAINS 122 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008326

PUBLICATION DATE: JUN 82

TITLE: GROUND WATER AQUIFERS. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *AQUIFERS; *BIBLIOGRAPHIES; *CONTAMINATION; *GROUNDWATER; MANAGEMENT; MATHEMATICAL MODELS; POLLUTANTS; *RESEARCH REPORTS; WATER POLLUTION; WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY; WATER WELLS

DESCRIPTIVE NOTE: 240P. PRICE CODE: PC N01/MF N01; PB82-867755

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING AQUIFER MANAGEMENT AND FACTORS TO BE CONSIDERED IN WATER SUPPLY DEVELOPMENT AND MANAGEMENT. AQUIFER CHARACTERISTICS AND THE POLLUTION OF AQUIFERS FROM SALT WATER AND/OR OTHER POLLUTANTS ARE CONSIDERED. WELL LEVEL FLUCTUATION AND FACTORS AFFECTING THE WATER TABLE ARE DISCUSSED. MATHEMATICAL MODELS USED TO STUDY WATER DEMAND ARE ALSO DISCUSSED. SPECIFIC AQUIFER SYSTEMS ARE EXAMINED. (CONTAINS 173 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008327

PUBLICATION DATE: JUN 82

TITLE: OCEAN WASTES DISPOSAL. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; INDUSTRIAL WASTES; LIQUID WASTES; *OCEAN DUMPING; *OCEANS; *RADIOACTIVE WASTES; *RESEARCH REPORTS; *SEWAGE; *SOLID WASTES; *WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 161P. PRICE CODE: PC N01/MF N01; PB82-867771

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE EFFECTS AND POTENTIAL IMPACTS OF WASTE MATERIALS DUMPING IN THE OCEANS. AMONG THE TYPES OF WASTES DISCUSSED ARE RADIOACTIVE WASTES, SOLID AND LIQUID INDUSTRIAL WASTES, AND SEWAGE TYPE WASTES. (CONTAINS 110 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008328

PUBLICATION DATE: JUN 82

TITLE: WATER QUALITY: PATHOGENIC BACTERIA. 1977-JUNE, 1982. (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *BIBLIOGRAPHIES; CHEMICAL TREATMENT; *DETECTION TECHNIQUES; MICROORGANISMS; *PATHOGENS; *RESEARCH REPORTS; WASTEWATER; WASTEWATER ANALYSIS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 214P. PRICE CODE: PC N01/MF N01; PB82-867987

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING WATER QUALITY, WASTEWATER TREATMENT AND THE PRESENCE, SURVIVAL, AND HAZARDS OF PATHOGENIC MICROORGANISMS. THE PROBABLE SOURCES AND FACTORS AFFECTING THE SURVIVAL OF THE BACTERIA ARE CONSIDERED. DETECTION METHODS AND PHYSICAL AND CHEMICAL TREATMENT METHODS ARE DISCUSSED. (CONTAINS 150 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008329

PUBLICATION DATE: JUN 82

TITLE: AQUATIC BIOLOGY: PLANKTON, ECOLOGY, AND ENVIRONMENT. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: ALGAE; *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; BIOLOGY; *ECOLOGY; LAKES; MEASUREMENT TECHNIQUES; MODELING; *PLANKTON; *PLANKTONIC POPULATION DYNAMICS; *RESEARCH REPORTS; RIVERS

DESCRIPTIVE NOTE: 148P. PRICE CODE: PC N01/MF N01; PB82-868118

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING ECOLOGICAL, BIOLOGICAL, AND ENVIRONMENTAL STUDIES ON PLANKTONICS IN LAKES AND RIVERS. PLANKTONIC PRIMARY PRODUCTIVITY, SUCCESSION, EVOLUTION, AND MIGRATION PATTERNS ARE DISCUSSED. PRODUCTION, SEDIMENTATION, AND DECOMPOSITION OF PLANKTONIC ALGAE IN LAKES AND PHYTOPLANKTON AND ZOOPLANKTON DYNAMICS IN CLOSED ENVIRONMENTS ARE INCLUDED. ALSO DISCUSSED ARE MODELING OF PLANKTONIC POPULATION DYNAMICS AND TECHNIQUES OF MEASURING PLANKTONIC BIOMASS. (CONTAINS 91 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008330

PUBLICATION DATE: JUN 82

TITLE: PERCOLATION TECHNIQUES FOR WATER QUALITY CONTROL AND WASTE TREATMENT. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *GROUNDWATER; *HYDROLOGY; LEACHING; MANAGEMENT; *PERCOLATION; *RESEARCH REPORTS;

*SOILS; *WASTEWATER TREATMENT; *WATER QUALITY
DESCRIPTIVE NOTE: 358P. PRICE CODE: PC N01/MF M01; PB82-868134

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PERCOLATION TECHNIQUES FOR WATER QUALITY CONTROL AND WASTE TREATMENT. WASTE WATER TREATMENT, GROUND WATER RECHARGE, AND SOIL WATER MOVEMENT ARE DISCUSSED. EFFECTS OF WASTES ON GROUND WATER, CHARACTERISTICS OF PERCOLATION OF WASTES, IRRIGATION WATER, SOIL PERCOLATION TESTS, AND VIRUS TRANSPORT IN SOIL ARE INCLUDED. ALSO DISCUSSED ARE PERCOLATION, MATHEMATICAL ANALYSIS AND MODELING (CONTAINS 255 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008331

PUBLICATION DATE: JUN 82

TITLE: AGRICULTURAL WATERSHEDS. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *AGRICULTURE; *BIBLIOGRAPHIES; MANAGEMENT; MODELING; *MONITORING; *NONPOINT SOURCE POLLUTION; PESTICIDES; *RESEARCH REPORTS; *RUNOFF; SOIL EROSION; *WATER DEMAND; *WATER QUALITY; *WATERSHEDS

DESCRIPTIVE NOTE: 234P. PRICE CODE: PC N01/MF N01; PB82-867888

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING MANAGEMENT, PROTECTION, RESEARCH, AND MODELING OF AGRICULTURAL WATERSHEDS AND THEIR RELATED SUBJECTS. DETERMINANTS OF WATER QUALITY, ECOLOGICAL PERSPECTIVE ON WATER QUALITY, SOIL CONSERVATION, AND PESTICIDE RESIDUES IN WATER ARE STUDIED. REMOTE SENSING TECHNIQUES FOR PREDICTION OF WATERSHED RUNOFF, SOIL LOSS, AND AGRICULTURAL WATER DEMAND ARE DISCUSSED. ALSO DISCUSSED IS THE NONPOINT SOURCE POLLUTION FROM AGRICULTURAL RUNOFF. (CONTAINS 158 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008332

PUBLICATION DATE: JUN 82

TITLE: ION EXCHANGE RESINS. JUNE, 1976-JUNE, 1982 (CITATIONS FROM THE ENERGY DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; CHEMICAL REACTIONS; HAZARDOUS WASTES; HEAVY METALS; *ION EXCHANGE RESINS; POWER PLANTS; PURIFICATION; *RADIOACTIVE WASTES; *RESEARCH REPORTS; *WASTE MANAGEMENT; *WASTE TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 275P. PRICE CODE: PC N01/MF N01; PB82-868019

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING ION EXCHANGE RESINS AND MATERIALS AND THEIR APPLICATIONS. RECOVERY, PURIFICATION AND TREATMENT OF URANIUM, PLUTONIUM, THORIUM, AND OTHER HEAVY METALS; OF RADIOACTIVE WASTES; AND, OF WATER AND OTHER VARIOUS SUBSTANCES, ARE DISCUSSED. UTILIZATION OF ION EXCHANGE RESINS IN NUCLEAR REACTORS AND POWER PLANTS AND IN CHEMICAL REACTIONS AND PROCEDURES ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 273 CITATIONS, 137 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008333

PUBLICATION DATE: JUN 82

TITLE: POLYCHLORINATED BIPHENYLS IN THE ENVIRONMENT. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; COASTAL SEAWATER; ENVIRONMENTAL IMPACTS; *ENVIRONMENTAL RESEARCH; LAKES; *MONITORING; PCB; POLLUTANTS; POLLUTION ABATEMENT; *POLYCHLORINATED BIPHENYLS; *RESEARCH REPORTS; RIVERS; SEDIMENTS; SOILS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 180P. PRICE CODE: PC N01/MF N01; PB82-868266

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PCB POLLUTION OF THE ENVIRONMENT. THE DISTRIBUTION AND CONCENTRATION OF PCB'S IN RIVERS, LAKES, COASTAL SEAWATER, SEDIMENTS, AND SOIL ARE DISCUSSED. MONITORING METHODS AND ANALYTICAL TECHNIQUES TO IDENTIFY AND QUANTITATE PCB'S ARE CONSIDERED. THE SOURCES, ENVIRONMENTAL EFFECTS, FATE OF THESE POLLUTANTS, AND METHODS TO ENHANCE THEIR BIODEGRADATION ARE ALSO DISCUSSED. (CONTAINS 127 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008334

PUBLICATION DATE: JUL 82

TITLE: OIL SPILLS: BIOLOGICAL EFFECTS. JUNE, 1981-JULY, 1982. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: ABSTRACTS; *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *BIOLOGY; *ENVIRONMENTAL IMPACTS; METABOLIC PRODUCTS; MICROORGANISMS; *OIL SPILLS; *RESEARCH REPORTS; RESIDUE ANALYSIS; WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: 132P. PRICE CODE: PC N01/MF N01; PB82-810391

ABSTRACT: THIS VOLUME OF SELECTED ABSTRACTS COVERS ASPECTS OF THE BIOLOGICAL ECOLOGICAL EFFECTS OF OIL SPILLS IN SALT AND FRESH WATER. THE EFFECTS ON MICROORGANISMS, PLANTS, AND ANIMALS ARE STUDIED, ALONG WITH RESEARCH ON THE RESIDUES AND METABOLIC PRODUCTS OF VARIOUS OIL COMPONENTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 123 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008335

PUBLICATION DATE: JUL 82

TITLE: ACTIVATED SLUDGE TREATMENT. FEBRUARY, 1981-MAY, 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *ACTIVATED SLUDGE; *AGRICULTURAL WASTES; *BIBLIOGRAPHIES; DESIGN; ENGINEERING; HEALTH ASPECTS; *INDUSTRIAL WASTES; MICROBIOLOGY; *MUNICIPAL WASTES; *RESEARCH REPORTS; SLUDGE; *SLUDGE TREATMENT; TECHNOLOGY; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 163P. PRICE CODE: PC N31/MF N01; PB82-810524

ABSTRACT: CITATIONS FROM THE WORLDWIDE ENGINEERING INDEX ON ACTIVATED SLUDGE TREATMENT OF MUNICIPAL, INDUSTRIAL AND AGRICULTURAL WASTES ARE PRESENTED. REPORTS DEALING ONLY WITH SLUDGE DISPOSAL ARE EXCLUDED. THE SELECTION OF THE BEST TECHNOLOGY, BIOCHEMICAL PROCESSES, CONVERSION, DESIGN, DETERIORATION, MICROBIOLOGY, UTILIZATION, AND INACTIVATION OF VIRUSES ARE STUDIED. WASTES FROM AIRCRAFT OVERHAUL TO RUM REFINERY, PRINTING PLANTS, PAPER MILLS, AND TIMBER CUTS TREATED BY THE ACTIVATED SLUDGE PROCESS ARE INCLUDED IN THE BIBLIOGRAPHY. (THIS UPDATED BIBLIOGRAPHY CONTAINS 156 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008336

PUBLICATION DATE: JUL 82

TITLE: AQUATIC POPULATION DYNAMICS. 1978-JULY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *AQUATIC ENVIRONMENTS; ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *BIOLOGY; DEMOGRAPHY; *ECOLOGY; *POPULATION; *POPULATION DYNAMICS; *RESEARCH REPORTS; *WATER POLLUTION; *WATER RESOURCES

DESCRIPTIVE NOTE: 175P. PRICE CODE: PC N01/MF N01; PB82-871187

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING AQUATIC POPULATION DYNAMICS. TOPICS INCLUDE PREDATOR-PREY RELATIONSHIPS, POPULATION ECOLOGY, LABORATORY CULTURE, WATER POLLUTION EFFECTS, SEASONAL VARIATION, AND NUTRIENTS BIOASSAY. TROPHIC DYNAMICS, FOOD CHAINS, SPECIES DIVERSITY, BOTTOM SEDIMENTS, NUTRIENT CYCLING, MORTALITY EFFECTS, LIFE HISTORY STUDIES, MODELING, AND ANALYTICAL TECHNIQUES ARE DISCUSSED. (CONTAINS 105 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008337

PUBLICATION DATE: MAY 82

TITLE: HANDBOOK OF ENVIRONMENTAL QUALITY MEASUREMENT AND ASSESSMENT: METHODS AND TECHNIQUES.

PERSONAL AUTHOR: HENDERSON, JIM E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ASSESSMENT; *ENVIRONMENTAL QUALITY; EVALUATION; *GUIDELINES; *HANDBOOKS; *MEASUREMENT; *PLANNING

DESCRIPTIVE NOTE: 354P. PRICE CODE: PC A16/MF A01; AD-A114 914/5

ABSTRACT: GUIDANCE IS PROVIDED FOR THE SELECTION AND USE OF ENVIRONMENTAL ANALYSIS TECHNIQUES FOR ENVIRONMENTAL QUALITY PLANNING AND EVALUATION. USES OF GENERIC TYPES OF ENVIRONMENTAL ANALYSIS METHODS (SUCH AS ENVIRONMENTAL IMPACT MATRICES FOR ENVIRONMENTAL PLANNING) ARE EXPLAINED. TECHNIQUE PROFILES ARE GIVEN TO SUPPORT PLANNING STEPS, AND FOUR PERFORMANCE MATRICES ARE GIVEN TO ASSIST THE USER. ONE SECTION CONTAINS MEASUREMENT AND EVALUATION TECHNIQUES FOR USE IN ENVIRONMENTAL QUALITY EVALUATION PROCEDURES WITH (A) TECHNIQUE PROFILES THAT DESCRIBE METHODS, TECHNIQUES, AND PROCEDURES FOR CHARACTERISTICS MATRICES. AN EXTENSIVE BIBLIOGRAPHY CONTAINS THE REFERENCES, REPORTS, AND CITATIONS ALSO CONSIDERED IN PREPARING THE HANDBOOK.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008338

PUBLICATION DATE: JUL 79

TITLE: NATIONAL SECONDARY DRINKING WATER REGULATIONS.

DESCRIPTOR: *AESTHETICS; *CONTAMINANTS; *DRINKING WATER; *GUIDELINES; *REGULATIONS; *SAFE DRINKING WATER ACT; *STANDARDS; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: 42P. PRICE CODE: PC A03/MF A01; PB82-225913

ABSTRACT: THESE NATIONAL SECONDARY DRINKING WATER REGULATIONS ARE PURSUANT TO SECTION 1412 OF THE SAFE

DRINKING WATER ACT, AS AMENDED (42 U.S.C.300G-1). THESE REGULATIONS CONTROL CONTAMINANTS IN DRINKING WATER THAT PRIMARILY AFFECT THE AESTHETIC QUALITIES RELATING TO THE PUBLIC ACCEPTANCE OF DRINKING WATER. AT CONSIDERABLY HIGHER CONCENTRATIONS OF THESE CONTAMINANTS, HEALTH IMPLICATIONS MAY ALSO EXIST AS WELL AS AESTHETIC DEGRADATION. THE REGULATIONS ARE NOT FEDERALLY ENFORCEABLE BUT ARE INTENDED AS GUIDELINES FOR THE STATES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008339

PUBLICATION DATE: 81

TITLE: MICROPOLLUTANTS PRODUCED BY DISINFECTION OF WASTEWATER EFFLUENTS.

PERSONAL AUTHOR: JOLLEY, R. L.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; CHLORINE; *DISINFECTION; *EFFLUENTS; *MICROPOLLUTANTS; *MUTAGENS; *OZONE; *RESEARCH REPORTS; *ULTRAVIOLET LIGHT; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 25P. PRICE CODE: PC A02/MF A01; DE82004064

ABSTRACT: RECENT RESEARCH CONDUCTED WITH THE OBJECTIVE OF DETERMINING SOME OF THE CHEMICAL MUTAGENIC CHARACTERISTICS OF NONVOLATILE MICROPOLLUTANTS IN TREATED WASTEWATER EFFLUENTS IS SUMMARIZED. THE EFFLUENTS FROM NINE WASTEWATER PLANTS WERE EXAMINED RELATIVE TO THE CHEMICAL EFFECTS OF THE DISINFECTANTS CHLORINE, OZONE, AND UV LIGHT ON NONVOLATILE ORGANIC CONSTITUENTS AND THE FORMATION OF MUTAGENIC CONSTITUENTS DURING DISINFECTION. RESULTS INDICATE THAT DISINFECTION BY CHLORINE OR OZONE CAN LEAD TO AN INCREASE IN THE NUMBER OF MUTAGENIC MATERIALS IN THE EFFLUENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008340

PUBLICATION DATE: NOV 81

TITLE: SOME RECENT PROGRESS IN THE ORGANIC CHEMISTRY OF WATER CHLORINATION.

PERSONAL AUTHOR: BEAN, R. M.

DESCRIPTOR: CARBON DIOXIDE; *CHEMISTRY; *CHLORINATION; CHLORINE; *DISINFECTION; *ORGANIC CHEMISTRY; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 13P. PRICE CODE: PC A02/MF A01; DE82005946

ABSTRACT: RESEARCH RELATED TO ORGANIC REACTIONS OCCURING DURING LOW-LEVEL CHLORINATION OF NATURAL WATERS IS REVIEWED. TOPICS DISCUSSED ARE: HUMATE MATERIALS: POTENTIAL INTERACTIONS WITH AQUEOUS CHLORINE; EFFECTS OF PH ON REACTIVITY OF AQUEOUS CHLORINE AT LOW CONCENTRATIONS; NATURAL PHENOLICS AS SUBSTRATES FOR CHLORINE: HALOFORM PRODUCTION; PROTEINS AS SUBSTRATES FOR CHLORINE: PRODUCTION OF CARBON DIOXIDE AND HALOACETONITRILES, AND DEPOLYMERIZATION REACTIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008341

PUBLICATION DATE: JUN 81

TITLE: DEVELOPMENT OF THE FECAL STREPTOCOCCUS GROUP AND ITS INDIVIDUAL SPECIES AS WATER QUALITY INDICATORS.

PERSONAL AUTHOR: SPEIDEL, HAROLD K.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *FECAL STREPTOCOCCI; *INDICATORS; *LABORATORY PROCEDURES; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 15P. PRICE CODE: PC A02/MF A01; PB82-211475

ABSTRACT: PROCEDURES PROPOSED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY FOR THE VERIFICATION AND SPECIATION OF FECAL STREPTOCOCCI WERE EVALUATED USING 9 STANDARD CULTURES OF STREPTOCOCCI OBTAINED FROM THE AMERICAN TYPE CULTURE COLLECTION (ATCC). THE VERIFICATION PORTION OF THE PROCEDURE WAS FOUND TO BE VERY USEFUL FOR THE STANDARD CULTURES AS WELL AS ENVIRONMENTAL ISOLATES. THE SPECIATION METHOD WAS NOT ABLE TO SUCCESSFULLY SPECIATE 67% OF THE STANDARD CULTURES. THE MAJOR PROBLEMS WHICH AROSE IN THE USE OF THE SPECIATION SCHEME INCLUDED: CARBOHYDRATE FERMENTATION REACTIONS, HEMOLYTIC REACTIONS, TELURITE REDUCTION AND EXCESSIVE TIME AND MEDIA REQUIREMENTS. A NEW SCHEME WAS DEVELOPED TO SPECIATE THE FECAL STREPTOCOCCI. THIS NEW PROCEDURE WAS BASED UPON DIFFERENCES IN THE FERMENTATION OF SIX CARBOHYDRATES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008342

PUBLICATION DATE: 81

TITLE: OPERATIONAL WATER QUALITY MANAGEMENT: BEYOND PLANNING AND DESIGN. EXECUTIVE REPORT 7, BASED ON RESEARCH CONDUCTED AT THE INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS (IIASA).

PERSONAL AUTHOR: BECK, M. B.

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *EVALUATION; *FACILITIES; *MAINTENANCE; *MANAGEMENT; *OPERATIONS

(WASTEWATER); *PERFORMANCE EVALUATION; PLANNING; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: 83P. PRICE CODE: PC E04/MF E04; PB82-226754

ABSTRACT: OF ALL AREAS OF CONSIDERATION INVOLVED IN THE PLANNING, DESIGN, AND CONSTRUCTION OF WASTEWATER TREATMENT FACILITIES, OPERATION AND MAINTENANCE (O AND M) IS THE FUNDAMENTAL MEASUREMENT OF A FACILITY'S PERFORMANCE; THIS IS ALSO MANY TIMES THE AREA MOST OVERLOOKED DURING THE PLANNING PHASE. THAT ONLY HALF OF ALL TREATMENT FACILITIES IN THE US ARE MEETING THEIR DESIGN STANDARDS FOR BIOCHEMICAL OXYGEN DEMAND AND SUSPENDED SOLIDS CLEARLY EXEMPLIFIES THE RESULT OF POOR O AND M.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008343

PUBLICATION DATE: MAY 82

TITLE: WASTE DISPOSAL AND POLLUTION CONTROL IN THE METAL INDUSTRY. 1970-MAY, 1982 (CITATIONS FROM POLLUTION ABSTRACTS.)

DESCRIPTOR: AIR POLLUTION; *BIBLIOGRAPHIES; ENVIRONMENTAL IMPACTS; HEAVY METALS; *INDUSTRIAL WASTES; *METAL INDUSTRIES; METALS; *MONITORING; POLLUTANTS; *POLLUTION CONTROL; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 197P. PRICE CODE: PC N01/MF N01; PB82-866005

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING INDUSTRIAL METAL MANUFACTURER'S MONITORING AND CONTROL OF WASTE DISPOSAL AND POLLUTION GENERATORS FOR PROCESSES OTHER THAN FINISHING. ATMOSPHERIC EMISSIONS SUCH AS SULFUR OXIDE EMISSIONS, DUST POLLUTANTS, NITROGEN OXIDES, AND ETHER GASES ARE DISCUSSED RELATIVE TO EFFECTS ON SURROUNDING VEGETATION AND CONTROL. HEAVY METAL REMOVAL, AS WELL AS WASTE WATER TREATMENT PROCESSES, ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 231 CITATIONS, 17 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008344

PUBLICATION DATE: MAY 82

TITLE: WATER RATES: RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL. 1977-MAY, 82 (CITATIONS FROM THE SELECTED WATER RESOURCES ABST. DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; CONSERVATION; ECONOMIC FACTORS; *MANAGEMENT; *POLICIES; *RATES; *RESEARCH REPORTS; *WATER RATES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 192P. PRICE CODE: PC N01/MF N01; PB82-866526

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING DOMESTIC, COMMERCIAL, AND INDUSTRIAL WATER RATES, WATER DEMANDS, AND MANAGEMENT OF WATER SUPPLIES. BLOCK RATES AND METERED RATES ARE DISCUSSED, AND THE EFFECTS OF METERING ON WATER CONSERVATION ARE CONSIDERED. WATER CONSERVATION METHODS AND THE EFFECTS OF WATER CONSERVATION POLICIES OR USAGE ARE INCLUDED, AND THE ECONOMICS AND POLITICS OF WATER CONSERVATION ARE ALSO DISCUSSED. (CONTAINS 137 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008345

PUBLICATION DATE: MAY 82

TITLE: CHROMATOGRAPHY FOR POLLUTION AND TOXICOLOGICAL ANALYSIS. NOVEMBER, 1976-MAY, 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ADSORPTION; AIR POLLUTION; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *CHROMATOGRAPHY; INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *POLLUTION CONTROL; *POLLUTANTS; *RESEARCH REPORTS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY; WATER POLLUTION

DESCRIPTIVE NOTE: 453P. PRICE CODE: PC N01/MF N01; PB82-867052

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING RESEARCH AND DEVELOPMENT OF CHROMATOGRAPHIC ADSORPTION PROCESSES FOR ANALYSIS OF POLLUTION AND TOXINS FROM INDUSTRY. ADSORPTION OF COMPOUNDS IN AN ASCENDING MOLECULAR WEIGHT ORDER ONTO SUCH ADSORBENT MATERIALS AS ACTIVATED CARBON, ALUMINA, OR SILICA GEL IS DISCUSSED WITH REFERENCE TO PERFORMANCE AND APPLICATIONS. VARIOUS AIR AND WATER POLLUTANTS, WASTES, AND TOXIC MATERIALS ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 327 CITATIONS, 127 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008346

PUBLICATION DATE: MAY 82

TITLE: DETERGENT SURFACTANTS: ENVIRONMENTAL EFFECTS. 1977-MAY, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *DETERGENTS; *ENVIRONMENTAL IMPACTS; *PHOSPHATES; *RESEARCH REPORTS; *SURFACTANTS;

TOXICITY; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 244P. PRICE CODE: PC N01/MF N01; PB82-867342

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE ENVIRONMENTAL EFFECTS OF PHOSPHATE AND NON-PHOSPHATE DETERGENT BUILDERS (N-PDB) WITH EMPHASIS ON THE NON-PHOSPHATE SURFACTANTS. THE BIOACCUMULATION, BIODEGRADATION, TOXICITY, AND DISTRIBUTION OF THESE AGENTS ARE CONSIDERED. WASTEWATER FACILITIES AND THE METHODS FOR REMOVING THESE N-PDB FROM THE ENVIRONMENT ARE DISCUSSED. (CONTAINS 169 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008347

PUBLICATION DATE: MAY 82

TITLE: CHROMATOGRAPHY FOR POLLUTION AND TOXICOLOGICAL ANALYSIS. JULY, 1978-MAY, 1982 (CITATIONS FROM THE ENERGY DATA BASE.)

DESCRIPTOR: *ADSORPTION; AIR QUALITY; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *CHROMATOGRAPHY; *FOSSIL FUELS; *LABORATORY PROCEDURES; NUCLEAR POWER; OIL DRILLING; PERFORMANCE EVALUATION; PETROLEUM; *POLLUTANTS; *RESEARCH REPORTS; *TOXICOLOGY; *WATER QUALITY

DESCRIPTIVE NOTE: 325P. PRICE CODE: PC N01/MF N01; PB82-867615

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING CHROMATOGRAPHIC ADSORPTION PROCESSES OF WATER AND AIR POLLUTANTS AND TOXINS GENERATED PRIMARILY BY FOSSIL-FUEL AND NUCLEAR POWER PLANTS AND OIL DRILLING OPERATIONS. IDENTIFICATION OF POLLUTANTS IN OIL SHALE PROCESS WATERS; DIESEL, GASOLINE AND GASOHOL INTERNAL COMBUSTION ENGINE EXHAUST; HYDROCARBON COMPOSITION IN WATER DUE TO PETROLEUM SEEPAGE; AND, DETERMINATION OF TOXIC SUBSTANCES IN THE AIR, ARE DISCUSSED RELATIVE TO CHROMATOGRAPHIC PROCEDURES. PERFORMANCE EVALUATIONS FOR VARIOUS ADSORBENTS ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 288 CITATIONS, 88 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008348

PUBLICATION DATE: MAR 82

TITLE: EVALUATION OF SECONDARY ENVIRONMENTAL IMPACTS OF URBAN RUNOFF POLLUTION CONTROL.

PERSONAL AUTHOR: HUIBREGTSE, KATHRYN R.; GEINOPOLOS, ANTHONY

DESCRIPTOR: COST EFFECTIVENESS; *ENVIRONMENTAL IMPACTS; EQUIPMENT; *EVALUATION; PERFORMANCE EVALUATION; *POLLUTION CONTROL; SURFACE RUNOFF; *RUNOFF; SLUDGE; SLUDGE TREATMENT; *STORMWATER; *URBAN AREAS; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 123P. PRICE CODE: PC A06/MF A01; PB82-230329

ABSTRACT: THIS REPORT PRESENTS A GENERALIZED EVALUATION OF THE IMPACTS ASSOCIATED WITH DIFFERENT URBAN STORMWATER RUNOFF (UR) TREATMENT TECHNIQUES. THE REPORT ADDRESSES THE DEFINITION OF THE PROBLEM, ESTIMATES THE VOLUME AND CHARACTERISTICS OF THE UR AND THE SLUDGES EXPECTED, EVALUATES SIX METHODS OF UR SLUDGE TREATMENT, AND EXAMINES ALTERNATIVES AND IMPACTS FOR UR TREATMENT SLUDGE HANDLING SUCH AS BLEED/PUMP-BACK TO THE DRY-WEATHER PLANT, AND LAND DISPOSAL. THE MOST COST-EFFECTIVE SLUDGE TREATMENT ALTERNATIVE APPEARED TO BE LIME STABILIZATION FOLLOWED BY THICKENING, PRESSURE FILTER DEWATERING, AND LANDFILL DISPOSAL. SECONDARY IMPACTS INCLUDED COSTS, WATER QUALITY, NOISE, ENERGY CONSUMPTION, AIR POLLUTION, AND LAND AREA REQUIREMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008349

PUBLICATION DATE: JUN 82

TITLE: HYDROLOGY. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; GROUNDWATER; *HYDROLOGY; *POLLUTION CONTROL; *RESEARCH REPORTS; *STRIP MINING; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: 259P. PRICE CODE: PC N01/MF N01; PB82-868654

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE HYDROLOGIC IMPACTS OF STRIP MINING. THE POTENTIAL IMPACTS OF STRIP MINING ON SURFACE AND GROUND WATER AND MEASURES TO MONITOR AND CONTROL WATER POLLUTION ARE DISCUSSED. SITE REHABILITATION IS ALSO CONSIDERED. (CONTAINS 175 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008351

PUBLICATION DATE: JUN 82

TITLE: ANIMAL WASTE POLLUTION, TREATMENT, AND REGULATIONS. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ANIMAL WASTES; *BIBLIOGRAPHIES; *FARMS;

FEEDLOTS; *LIVESTOCK; *MANAGEMENT; *NONPOINT POLLUTION; *POLLUTION CONTROL; *REGULATIONS; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 224P. PRICE CODE: PC N01/MF N01; PB82-868811

ABSTRACT: THIS BIBLIOGRAPY CONTAINS CITATIONS CONCERNING FARM WASTE WATER TREATMENT, UTILIZATIONS, AND REGULATIONS. FARM WATER QUALITY MANAGEMENT, FEEDLOT POLLUTION CONTROL, REGULATIONS ON FEEDLOT OPERATIONS AND FARM WASTE WATER UTILIZATIONS ARE DISCUSSED. FARM NONPOINT POLLUTION SOURCES AND CONTROL, EFFECTS OF PASTURE RUNOFF, PESTICIDES, AND LIVESTOCK WASTES ON WATER QUALITY, AND RESEARCHES ON THE BIOLOGICAL TREATMENT OF WASTE WATER ARE INCLUDED. (CONTAINS 158 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008352

PUBLICATION DATE: MAY 81

TITLE: SELECTED WORKS IN WATER SUPPLY, WATER CONSERVATION AND WATER QUALITY PLANNING.

PERSONAL AUTHOR: CREWS, JAMES E.; TANG, JAMES

DESCRIPTOR: *CONSERVATION; *PLANNING; *RESEARCH REPORTS; *WATER CONSERVATION; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 451P. PRICE CODE: PC A20/MF A01; AD-A114 267/8

ABSTRACT: THE SELECTED PAPERS PRESENT SOME OF THE MORE SIGNIFICANT INSTITUTE WATER RESOURCES RESEARCH PROGRAMS DURING THE 1970'S CONCERNING WATER SUPPLY, WATER CONSERVATION AND WATER QUALITY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008353

TITLE: OVERVIEW OF MODELS USED IN LAND TREATMENT OF WASTEWATER.

PERSONAL AUTHOR: ISKANDAR, I. K.

DESCRIPTOR: *COST EFFECTIVENESS; *LAND APPLICATION; *MODELING; *MODELS; PUBLIC HEALTH; *RESEARCH REPORTS; SITE SELECTION; SOILS; *STATE-OF-THE-REVIEWS; TOXIC SUBSTANCES; *WASTEWATER TREATMENT

ABSTRACT: THIS REPORT SUMMARIZES THE STATE OF THE ART OF THE MODELING OF WASTEWATER RENOVATION BY LAND TREATMENT. THE MODELS DISCUSSED ARE CLASSIFIED BASED ON THEIR USE FOR PLANNING, SITE SELECTION AND COST ANALYSIS, AND FOR PREDICTING WATER AND SALT TRANSPORT IN SOILS, NITROGEN TRANSPORT AND TRANSFORMATIONS, PHOSPHORUS TRANSPORT AND TRANSFORMATIONS, VIROUS MOVEMENT IN SOILS, AND TOXIC METAL AND TRACE ORGANIC MOVEMENT IN SOILS. THIS REPORT COMPARES THE DIFFERENT MODELS AS TO THEIR PURPOSE, INPUT AND OUTPUT DATA, AND STATUS OF VALIDATION. IN ADDITION, THE REPORT INCLUDES A SECTION ON RESEARCH NEEDS FOR MODELING LAND TREATMENT OF WASTEWATER.

AVAILABILITY: MAR 82 31 PRICE CODE: A03/MF A01; AD-A114 403/9

IRIS ACCESSION NUMBER: EW008354

PUBLICATION DATE: JUN 82

TITLE: OFFSHORE DRILLING: ENVIRONMENTAL EFFECTS. 1976-JUNE, 1982 (CITATIONS FROM THE ENERGY DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *ENERGY; *ENVIRONMENTAL IMPACTS; EQUIPMENT; LEASES; *MARINE ENVIRONMENT; *OFFSHORE DRILLING; *OIL WELLS; *PERFORMANCE EVALUATION; PERMITS; *POLLUTION CONTROL; *REGULATIONS; *RESEARCH REPORTS; *TECHNOLOGY

DESCRIPTIVE NOTE: 233P. PRICE CODE: PC N01/MF N01; PB82-863853

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE IMPACTS OF OFFSHORE DRILLING ON THE ENVIRONMENT. POLLUTION CONTROL TECHNIQUES AND TECHNOLOGY ARE CONSIDERED PRIMARILY RELATIVE TO THEIR EFFICACY AND EFFICIENCY. SPECIFIC ENVIRONMENTAL IMPACT STATEMENTS, PERMIT APPLICATIONS, AND LEASE SALES ARE CITED AS ARE REGULATORY AND NON-REGULATORY REQUIREMENTS FOR DRILLING. (CONTAINS 209 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008355

PUBLICATION DATE: JUN 82

TITLE: ASBESTOS IN DRINKING WATER. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *ASBESTOS; *BIBLIOGRAPHIES; *DRINKING WATER; *HEALTH EFFECTS; PIPES (WATER); *PUBLIC HEALTH; *RESEARCH REPORTS; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 118P. PRICE CODE: PC N01/MF N01; PB82-868662

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING ASBESTOS FIBER CONTAMINATED DRINKING WATER. THE ROLE OF ASBESTOS CEMENT PIPES AND FACTORS INVOLVED IN THE RELEASE OF THE FIBERS ARE DISCUSSED. DISTRIBUTION DATA AND THE HEALTH EFFECT ARE CONSIDERED. ANALYTICAL METHODS TO QUALITATE AND

QUANTITATE ASBESTOS IN DRINKING WATER ARE ALSO DISCUSSED. (CONTAINS 77 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008356

PUBLICATION DATE: JUN 82

TITLE: OXIDATION LAGOONS: WASTE WATER AND SEWAGE TREATMENT. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; BIOLOGICAL TREATMENT; DESIGN; DOMESTIC WASTES; FACILITIES; INDUSTRIAL WASTES; *LAGOONS; MAINTENANCE; MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *OXIDATION; POLLUTION CONTROL; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 201P. PRICE CODE: PC N01/MF N01; PB82-868951

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING OXIDATION LAGOON WASTE WATER AND SEWAGE TREATMENT. INDUSTRIAL, MUNICIPAL, AND DOMESTIC WASTES ARE DISCUSSED. DESIGN, OPERATION, AND MAINTENANCE OF WASTE WATER AND SEWAGE TREATMENT FACILITIES ARE ALSO DISCUSSED. BIOLOGICAL WASTE TREATMENT, WATER POLLUTION SOURCES, AND POLLUTANT IDENTIFICATION ARE INCLUDED. (CONTAINS 144 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008358

PUBLICATION DATE: 82

TITLE: APPLICATION OF ON-LINE ANALYTICAL INSTRUMENTATION TO PROCESS CONTROL.

PERSONAL AUTHOR: ARTHUR, ROBERT M.

DESCRIPTOR: *ACTIVATED SLUDGE; *ANALYTICAL TECHNIQUES; *INSTRUCTIONAL MATERIALS; *INSTRUMENTATION; *MONITORING; MUNICPAL WASTEWATER; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 222P. PRICE: $29.95

ABSTRACT: THIS WORK CONCENTRATES ON ON-LINE ANALYTICAL INSTRUMENTATION AND PROVIDES INFORMATION THAT CAN BE USED IN MANUAL OR AUTOMATIC PROCESS CONTROL. SUBJECTS COVERED INCLUDE INSTRUMENTATION AND AUTOMATION OF WASTEWATER TREATMENT PLANTS, HOW TO MONITOR BIOLOGICAL AND PHYSICAL PARAMETERS, ON-LINE SENSORS, MICROORGANISM VIABILITY, REAL-TIME MONITORING OF BIOMASS RESPIRATION, ON-LINE MEASUREMENTS OF SLUDGE SETTLING AND CONCENTRATION, INNOVATIONS IN

MUNICIPAL WASTEWATER TREATMENT, AND DISCUSSIONS OF HOW AUTOMATION, CONTROL AND AUTOMATIC CONTROL RELATE TO THE PROCESS.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008359

PUBLICATION DATE: SEP 82

TITLE: WATER SUPPLY AND SANITATION IN DEVELOPING COUNTRIES.

PERSONAL AUTHOR: SCHILER, E. J.; DROSTE, R. L.

DESCRIPTOR: *AFRICA; DESIGN; *DEVELOPING NATIONS; ECONOMIC FACTORS; GUIDES; *INTERNATIONAL PROGRAMS; *INSTRUCTIONAL MATERIALS; MANAGEMENT; *OPERATIONS (WATER); *POST SECONDARY EDUCATION; PROJECT PLANNING; *RENEWABLE ENERGY TECHNOLOGY; *SANITATION; *TRAINING; *WATER SUPPLY

DESCRIPTIVE NOTE: 368P. PRICE: $29.95

ABSTRACT: THIS BOOK PRESENTS A COMPREHENSIVE APPROACH FOR ENGINEERS, PLANNERS AND ADMINISTRATORS INVOLVED IN DESIGN AND DELIVERY OF WATER SUPPLY AND SANITATION SYSTEMS FOR DEVELOPING COUNTRIES. EMPHASIZES RENEWABLE ENERGY TECHNOLOGY AND LOW-COST ON-SITE SYSTEMS, AND COVERS THE INFLUENCES OF SOCIOCULTURAL FACTORS, DISEASE PROBLEMS OF TROPICAL COUNTRIES AND CONTINGENT ECONOMICS. A PRACTICAL GUIDE TO ASSESSMENT AND PREPARATION, IT ALSO ENCOMPASSES OPERATION, MAINTENANCE AND COUNTERPART TRAINING, WHICH ARE INCREASINGLY DEMANDED BY DEVELOPING COUNTRIES. THIS TEXT RESULTED FROM COURSE MATERIAL TESTED AT THE UNIVERSITY OF OTTAWA IN 1981, AND PLANNING EVOLVED FROM TWO YEARS OF PROJECTS AND WORKSHOPS IN EAST AND SOUTHERN AFRICA.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008360

PUBLICATION DATE: 82

TITLE: APPROPRIATE METHODS OF TREATING WATER AND WASTEWATER IN DEVELOPING COUNTRIES.

PERSONAL AUTHOR: REID, GEORGE W.

DESCRIPTOR: *APPROPRIATE TECHNOLOGY; *COSTS; *DEVELOPING NATIONS; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *MODELS; *POST SECONDARY EDUCATION; *TECHNOLOGY; WASTEWATER DISPOSAL; *WASTEWATER TREATMENT; WATER DEMAND; *WATER SUPPLY; *WATER TREATMENT; WATER WELLS

DESCRIPTIVE NOTE: 392P. PRICE: $27.50

ABSTRACT: THIS BOOK ADDRESSES PROBLEMS OF SUPPLYING APPROPRIATE TECHNOLOGY TO DEVELOPING COUNTRIES. APPROPRIATE METHODS OF WATER AND WASTEWATER TREATMENT IN DEVELOPING

NATIONS ARE THE MAJOR AREAS COVERED. TECHNOLOGY TRANSFER AND UTILIZATION, RURAL WATER SUPPLY, SLOW AND RAPID SAND FILTRATION, SMALL WELLS, WATER DEMAND MODELS, TREATMENT SYSTEM COSTS, AND EXAMPLE LESSONS OF DEVELOPMENT HISTORY AND MANAGEMENT CONCERNS ARE INCLUDED.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008361

PUBLICATION DATE: NOV 82

TITLE: PROCESS CONTROL COMPUTER SYSTEMS - GUIDE FOR MANAGERS.

PERSONAL AUTHOR: SITRE, TOM G.

DESCRIPTOR: *COMPUTER APPLICATIONS; *COMPUTERS; DESIGN; *GUIDES; INSTALLATION; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *PLANNING; POST SECONDARY EDUCATION; *PROCESS CONTROL; STAFFING

DESCRIPTIVE NOTE: 250P. PRICE: $29.95

ABSTRACT: THIS GUIDE FOR MANAGERS SHOWS HOW TO SET UP AN EFFECTIVE WORKING PROCESS CONTROL SYSTEM. IT PROVIDES A FRAMEWORK FOR THE APPLICATION OF DIGITAL COMPUTERS TO PROCESS CONTROL AND AUTOMATION, AND GIVES MANAGERS A BASIS FOR DECISION-MAKING. STEP BY STEP EXPLANATIONS RANGE FROM BASIC UNDERSTANDING OF HARDWARE AND SOFTWARE COMPONENTS TO PLANNING, DESIGN, IMPLEMENTATION, STAFFING AND MANAGEMENT STAGES. MAJOR SECTIONS OF THIS VOLUME INCLUDE PROCESS CONTROL VS. DATA PROCESSING, CONTROL SYSTEM HARDWARE AND SOFTWARE, BENEFITS OF DIGITAL CONTROL, PLANNING, DESIGN, IMPLEMENTATION AND INSTALLATION, STAFFING, MANAGEMENT AND OPTIMIZATION.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008362

PUBLICATION DATE: SEP 82

TITLE: OXIDATION DITCHES IN WASTEWATER TREATMENT.

PERSONAL AUTHOR: MANDT, MIKKEL G.; BELL, BRUCE A.

DESCRIPTOR: *AEROBIC PROCESSES; *ANAEROBIC PROCESSES; *DESIGN; ECONOMIC FACTORS; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OXIDATION DITCHES; *POST SECONDARY EDUCATION; PROCESS DESIGN; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 169P. PRICE: $29.95

ABSTRACT: THIS BOOK COVERS THE LATEST THEORETICAL AND PRACTICAL INFORMATION ON THE USE OF OXIDATION DITCHES IN WASTEWATER TREATMENT. NUMEROUS EXAMPLES OF THEORETICAL

KINETIC CONSTANTS AND EMPIRICAL EQUATIONS ARE GIVEN TO GUIDE THE DESIGNER. INCLUDED ARE SECTIONS DISCUSSING HISTORY, DEFINITIONS, DEVELOPMENT, PROCESS MODIFICATIONS AND DESIGN, PROCESS KINETICS, OPERATION AND MAINTENANCE, AND ECONOMIC CONSIDERATIONS.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008363

PUBLICATION DATE: JAN 83

TITLE: THE ACTIVATED SLUDGE PROCESS.

PERSONAL AUTHOR: JUNKINS, DAVID R.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; EFFLUENTS; EQUIPMENT MAINTENANCE; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; MONITORING; *OPERATIONS (WASTEWATER); POLLUTION CONTROL; *POST SECONDARY EDUCATION; PROCESS CONTROL; *TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 260P. PRICE: $29.95

ABSTRACT: THIS HANDBOOK PROVIDES AN EXPLANATION OF THE ACTIVATED SLUDGE PROCESS AND OPERATION OF THE ACTIVATED SLUDGE SYSTEM. DATA IN THE LITERATURE ON PROCESS MECHANICS IS FOLLOWED BY DETAILED CONSIDERATION OF EFFECTIVE CONTROL AND TROUBLESHOOTING PRACTICES. MAJOR SECTIONS OF THE BOOK DETAIL PROCESS MECHANICS, FACTORS AFFECTING OPERATION, PROCESS MODIFICATIONS AND MONITORING, OPERATIONAL CONTROL, TROUBLE-SHOOTING AND PLANT START-UP.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008364

PUBLICATION DATE: OCT 82

TITLE: BIOLOGICAL ACTIVATED CARBON - ENHANCED AEROBIC BIOLOGICAL ACTIVITY IN GAC SYSTEMS.

PERSONAL AUTHOR: RICE, RIP G.; ROBSON, MICHAEL C.

DESCRIPTOR: *BIOLOGICAL ACTIVATED CARBON; *CASE STUDIES; *DRINKING WATER; *ECONOMIC FACTORS; *ENGINEERING; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; MUNICIPALITIES; *POST SECONDARY EDUCATION; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 610P. PRICE: $47.50

ABSTRACT: THIS BOOK COMPREHENSIVELY PRESENTS INFORMATION AND DATA ON WATER AND WASTEWATER TREATMENT PROCESSES INVOLVING BIOLOGICAL ACTIVATED CARBON (BAC). FEATURED ARE DETAILED DISCUSSIONS OF BAC APPLICATION TO DRINKING WATER, MUNICIPAL WASTEWATER TREATMENT, AND INDUSTRIAL WASTEWATER TREATMENT, CASE STUDIES, ECONOMIC FACTORS, AND ENGINEERING

FACTORS.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008365

PUBLICATION DATE: OCT 82

TITLE: HAZARDOUS WASTE MANAGEMENT FOR THE 80'S.

PERSONAL AUTHOR: SWEENEY, THOMAS L.; AND OTHERS

DESCRIPTOR: BIODEGRADATION; *CASE HISTORIES; *ENVIRONMENTAL ENGINEERING; FACILITIES; GROUNDWATER; *HAZARDOUS WASTES; *INSTRUCTIONAL MATERIALS; MONITORING; *POLLUTION CONTROL; POST SECONDARY EDUCATION; SITE CLEANUP; *WASTE DISPOSAL; *WASTE MANAGEMENT; WASTE TREATMENT

DESCRIPTIVE NOTE: 553P. PRICE: $39.95

ABSTRACT: THIS VOLUME PRESENTS CRITICAL ISSUES IN HAZARDOUS WASTE MANAGEMENT SUCH AS GROUNDWATER AND SEEPAGE, TREATMENT, STORAGE AND DISPOSAL, SITE CLEANUP, AND SAFETY AND LEGAL CONSIDERATIONS. THE BOOK IS AN OUTGROWTH OF THE SECOND OHIO ENVIRONMENTAL ENGINEERING CONFERENCE HELD IN COLUMBUS, OHIO, MARCH 1982, UNDER JOINT SPONSORSHIP OF THE OHIO STATE UNIVERSITY DEPARTMENT OF CIVIL ENGINEERING AND THE CENTRAL OHIO SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE). THE 34 CHAPTERS CONSIST OF ACTUAL CASE HISTORIES ALONG WITH PRACTICAL, USABLE INFORMATION AND DATA.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008366

PUBLICATION DATE: 82

TITLE: ANALYZING NATURAL SYSTEMS ANALYSIS FOR REGIONAL RESIDUALS-- ENVIRONMENTAL QUALITY MANAGEMENT.

PERSONAL AUTHOR: BASTA, DANIEL J.; BOWER, BLAIR T.

DESCRIPTOR: *ATMOSPHERIC SYSTEMS; *ENVIRONMENTAL QUALITY; *MANAGEMENT; *MODELS; *NATURAL SYSTEMS; *SURFACE RUNOFF; *WATER RESOURCES

DESCRIPTIVE NOTE: 564P. PRICE: $30.00

ABSTRACT: DURING THE PAST TWO DECADES THE DEVELOPMENT AND USE OF MODELS TO ANALYZE NATURAL SYSTEMS HAS GREATLY INTENSIFIED, PRIMARILY IN RESPONSE TO THE MANDATED PLANNING REQUIREMENTS OF THE NATIONAL ENVIRONMENTAL POLICY ACT, THE CLEAN AIR AND WATER ACTS, AND RELATED STATE AND LOCAL LEGISLATION. THIS VOLUME PROVIDES AN OVERALL MANAGEMENT FRAMEWORK-RESIDUALS ENVIRONMENTAL QUALITY MANAGEMENT-THAT IS BASED ON RESEARCH CONDUCTED OVER THE PAST DECADE BY RFF'S QUALITY OF THE ENVIRONMENT DIVISION. IT PROVIDES A PRACTICAL GUIDE TO THE SELECTION OF NATURAL SYSTEMS MODELS IN A REGIONAL MANAGEMENT CONTEXT. INCLUDED ARE DETAILED DESCRIPTIVE SUMMARIES OF MODELS APPROPRIATE FOR ANALYZING LAND RUNOFF, RECEIVING WATERS, AND ATMOSPHERIC SYSTEMS, AND ANNOTATED REFERENCES TO THESE MODELS.

AVAILABILITY: JOHNS HOPKINS UNIVERSITY PRESS, BALTIMORE, MD 21218

IRIS ACCESSION NUMBER: EW008368

PUBLICATION DATE: 82

TITLE: PURE AND WHOLESOME.

DESCRIPTOR: BIBLIOGRAPHIES; *CASE HISTORIES; CONTAMINATION; EFFLUENTS; ENVIRONMENTAL ENGINEERING; *HISTORY; HYDRAULICS; *INSTRUCTIONAL MATERIALS; SANITATION; *WASTE DISPOSAL; *WASTE TREATMENT; WATER POLLUTION; WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 180P. PRICE: $18.50

ABSTRACT: THIS BOOK PRESENTS A COLLECTION OF PAPERS FROM THE TURN OF THE CENTURY ON WATER AND WASTE TREATMENT. WATER SUPPLY, STREAM CONTAMINATION, SANITARY DISPOSAL OF REFUSE AND DUMPING INTO LARGE VOLUMES OF WATER ARE THE TOPICS OF THE PAPERS. PUBLISHED DISCUSSIONS OF EACH PAPER ARE ALSO PRESENTED. SUBJECTS AND AUTHORS ARE INDEXED, ALONG WITH A SELECTED BIBLIOGRAPHY ON THE HISTORY OF WATER SUPPLY, ENVIRONMENTAL ENGINEERING AND HYDRAULICS. THE SELECTIONS WERE MADE BY THE COMMITTEE ON HISTORY AND HERITAGE OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH STREET, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW008369

PUBLICATION DATE: AUG 81

TITLE: PROTECTING DRINKING WATER SUPPLIES THROUGH WATERSHED MANAGEMENT: A CASEBOOK FOR DEVISING LOCAL PROGRAMS.

PERSONAL AUTHOR: MILLER, T. L.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *DRINKING WATER; LEGISLATION; MANAGEMENT; PLANNING; POLICY FORMATION; POLLUTION CONTROL; REGULATIONS; *STATE-OF-THE-ART REVIEWS; *WATER QUALITY; *WATER RESOURCES; *WATERSHED MANAGEMENT; *WATER SUPPLY

ABSTRACT: THIS VOLUME DESCRIBES THE WATERSHED MANAGEMENT PROGRAMS DEVELOPED BY EIGHT COMMUNITIES ACROSS THE UNITED STATES. EACH COMMUNITY INCLUDED WAS SELECTED TO ILLUSTRATE CUTTING-EDGE PRACTICES AND TO HIGHLIGHT KEY FACTORS CONTRIBUTING TO PROGRAM SUCCESSES AND FAILURES. WATERSHED MANAGEMENT LEGISLATION, REGULATIONS, POLICIES, AND AGREEMENTS PROVIDE EXAMPLES OF METHODS USED TO PROTECT WATER SUPPLIES FROM POLLUTION. THE MATERIAL IS DESIGNED FOR USE BY WATER SYSTEMS AND LOCAL GOVERNMENTS IN DEVISING PROGRAMS TO PROTECT SURFACE WATER SUPPLY SOURCES.

AVAILABILITY: UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL, NC 27514

IRIS ACCESSION NUMBER: EW008370

PUBLICATION DATE: SEP 81

TITLE: DEVELOPMENT AND MANAGEMENT OF WATER FACILITIES FOR SMALL COMMUNITIES.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *DEVELOPMENT; *FACILITIES; *ECONOMICS; *MANAGEMENT; *PLANNING; *WATER SUPPLY; *WATER RESOURCES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 95P. PRICE: $8.00

ABSTRACT: THIS IS THE PROCEEDINGS OF THE SEPTEMBER 1981, CONFERENCE AT THE VIRGINIA WATER RESOURCES RESEARCH CENTER OF VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY. OWNERS AND MANAGERS OF WATER SYSTEMS, ELECTED AND APPOINTED LOCAL OFFICIALS, STATE AND FEDERAL AGENCY PERSONNEL AND MEMBERS OF THE SCIENTIFIC COMMUNITY CONVENED IN A TWO-DAY FORUM TO EXCHANGE INFORMATION AND EXPLORE ISSUES AND PROBLEMS RELATED TO PROVIDING WATER FOR SMALL COMMUNITIES AND RURAL AREAS. TOPICS OF PAPERS INCLUDE: THE CURRENT STATE OF WATER FACILITIES, THE AVAILABILITY AND PROTECTION OF WATER SUPPLIES, ORGANIZATION OF DELIVERY SYSTEMS, REGIONALIZATION OF SYSTEMS, RESOURCES FOR PLANNING AND DEVELOPMENT, AND FINANCIAL ANALYSIS.

AVAILABILITY: VIRGINIA WATER RESOURCES RESEARCH CENTER, VPI & SU, 617 NORTH MAIN ST., BLACKSBURG, VA 24060

IRIS ACCESSION NUMBER: EW008371

PUBLICATION DATE: 82

TITLE: BULKING OF ACTIVATED SLUDGE - PREVENTION OR CURE?

PERSONAL AUTHOR: CHAMBERS, B.; THOMLISON, E. J.

DESCRIPTOR: *ACTIVATED SLUDGE; *BULKING; CASE STUDIES; *CONFERENCE PROCEEDINGS; *INSTRUCTIONAL MATERIALS; MICROBIOLOGY; *OPERATIONS (WASTEWATER); REFERENCE MATERIALS; RESEARCH REPORTS; *SLUDGE TREATMENT; *STATE-OF-THE-ART-REVIEWS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 266P. PRICE: $69.95

ABSTRACT: THIS BOOK PRESENTS THE PROCEEDINGS OF A 1981 CONFERENCE ON BULKING OF ACTIVATED SLUDGE. THE FIRST PART OF THE BOOK OFFERS HISTORICAL BACKGROUND AND A STATEMENT OF THE CURRENT SITUATION IN THE FIELD. PART TWO COVERS FUNDAMENTAL MICROBIOLOGY. THE LAST TWO SECTIONS EXAMINE THE RESEARCH DONE ON BOTH PILOT-SCALE AND FULL-SCALE PLANTS.

AVAILABILITY: JOHN WILEY & SONS, INC., ONE WILEY DR., SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW008372

TITLE: SAFETY ELEMENTS IN LABORATORY PRACTICE.

DESCRIPTOR: *ACCIDENT PREVENTION; *AUDIOVISUAL AIDS; EQUIPMENT; *FILMS; *INSTRUCTIONAL MATERIALS; *LABORATORY SAFETY; *SAFETY; *SAFETY EDUCATION; SAFETY EQUIPMENT; TRAINING PROGRAMS

DESCRIPTIVE NOTE: 16MM, 20 MINUTE FILM.

ABSTRACT: THIS FILM IS DESIGNED TO AID IN TEACHING BASIC LABORATORY SAFETY PRINCIPLES TO EMPLOYEES OR STUDENTS IN LABORATORIES USING CHEMICALS IN INDUSTRY, SCHOOL, COLLEGE, OR HOSPITAL. TOPICS ADDRESSED IN THIS FILM INCLUDE: EYE PROTECTION, PROTECTIVE CLOTHING, GLASSWARE, APPARATUS SET-UP, TOXICITY, FLAMMABILITY, AND INJURY PREVENTION.

AVAILABILITY: FILMS, INC., P. O. BOX 11, NEWTON HIGHLANDS, MA 02161

IRIS ACCESSION NUMBER: EW008373

TITLE: SAFETY: ISN'T IT WORTH IT?

DESCRIPTOR: *ACCIDENT PREVENTION; *AUDIOVISUAL AIDS; CHEMICALS; *FILMS; HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *LABORATORY SAFETY; *SAFETY; *SAFETY EDUCATION; SAFETY EQUIPMENT; TRAINING PROGRAMS

DESCRIPTIVE NOTE: 16MM MP/14 MINUTES/COLOR/OPTICAL SOUND.

ABSTRACT: THIS FILM PRESENTS INFORMATION ON LABORATORY SAFETY AND ACCIDENT PREVENTION THROUGH A SERIES OF SITUATION VIGNETTES. IT IS DESIGNED FOR SCHOOLS, COLLEGES, PHARMACEUTICAL COMPANIES, INDUSTRIAL LABORATORIES, SCIENTIFIC RESEARCH LABORATORIES AND ANY OTHER SITUATIONS WHERE PEOPLE ARE WORKING IN A LABORATORY WITH CHEMICAL AND/OR BIOLOGICAL HAZARDS. TOPICS ADDRESSED INCLUDE CLEAN-UP OF CHEMICAL SPILLS, HANDLING INFECTIOUS SPECIMENS, AND THE PROPER USE OF PERSONAL PROTECTIVE EQUIPMENT.

AVAILABILITY: FILM COMMUNICATORS, 11136 WEDDINGTON ST., NORTH HOLLYWOOD, CA 91601

IRIS ACCESSION NUMBER: EW008374

PUBLICATION DATE: FEB 82

TITLE: ENERGY IN WASTEWATER TREATMENT.

PERSONAL AUTHOR: OWEN, WILLIAM F.

DESCRIPTOR: *ENERGY AUDITS; *ENERGY; *ENERGY CONSERVATION; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 373P.

ABSTRACT: THIS HANDBOOK IDENTIFIES THE KEY FACTORS INFLUENCING ENERGY CONSUMPTION IN WASTEWATER TREATMENT AND

CONCENTRATES ON THE LATEST ENERGY-EFFICIENT TREATMENT TECHNOLOGY. TOPICS PRESENTED INCLUDE AREAS OF MAJOR ENERGY USE, STABILIZATION OF ORGANICS, WATER CONVEYENCE, ENERGY-EFFICIENT AEROBIC AND ANAEROBIC TREATMENT, PUMPING SYSTEMS, AND ENERGY RECOVERY.

AVAILABILITY: PRENTICE-HALL, INC., ORDER DEPARTMENT, P. O. BOX 21X, ENGLEWOOD CLIFFS, NJ 07632

IRIS ACCESSION NUMBER: EW008375

PUBLICATION DATE: SEP 82

TITLE: GAS DETECTION--A STARTING POINT.

PERSONAL AUTHOR: NELSON, DAVID M.

DESCRIPTOR: *ACCIDENT PREVENTION; *GAS DETECTION; *GASES; *INSTRUMENTATION; *MONITORING; *SAFETY; *TRAINING

DESCRIPTIVE NOTE: 57-58P.

ABSTRACT: THE PURPOSE OF THIS ARTICLE IS TO HELP EDUCATE USERS OF GAS DETECTION INSTRUMENTS BY OFFERING A STARTING POINT IN THE BROAD AREA OF GAS DETECTION. BASIC DEFINITIONS, DETECTION PRINCIPLES, DETECTOR LOCATIONS, AND INFORMATION ON CALIBRATION METHODS ARE DISCUSSED.

AVAILABILITY: JOURNAL CITATION: INDUSTRIAL HYGIENE NEWS; V5 N5

IRIS ACCESSION NUMBER: EW008376

PUBLICATION DATE: 82

TITLE: ON-SITE SEWAGE TREATMENT.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *ENVIRONMENT; *ONSITE TREATMENT; *OPERATIONS (WASTEWATER); *RESEARCH; *RURAL AREAS; *SOILS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 352P. PRICE: ASAE MEMBER $16.00; NON-MEMBER $19.50

ABSTRACT: THIS PUBLICATION IS THE CONFERENCE PROCEEDINGS OF THE THIRD NATIONAL SYMPOSIUM ON INDIVIDUAL AND SMALL COMMUNITY SEWAGE TREATMENT. THE CONFERENCE, HELD IN DECEMBER, 1981, EXPLORED ONSITE SEWAGE TREATMENT WITH 40 PRESENTATIONS FROM SPECIALISTS INVOLVED IN RESEARCH AND DEVELOPMENT.

AVAILABILITY: AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS, DEPT. 0510, 2950 NILES ROAD, ST. JOSEPH, MI 49086

IRIS ACCESSION NUMBER: EW008377

TITLE: TRAINING PROGRAM FOR WASTEWATER TREATMENT PLANT OPERATORS--BASIC COURSE.

DESCRIPTOR: *AUDIOVISUAL AIDS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *POST SECONDARY EDUCATION; SLIDE PROGRAMS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: INSTRUCTIONS SET (287 SLIDES, 10 AUDIO CASSETTES, HANDBOOK AND OTHER MATERIALS)--$360.00, ORDER E0100; STUDENT MATERIALS (STUDENT WORKBOOK, PRE- AND POST-TRAINING QUESTIONNAIRE)--$8.50, ORDER E0110.

ABSTRACT: THESE MATERIALS PRESENT INFORMATION FOR A COURSE DESIGNED FOR WORKERS WITH SOME EXPERIENCE AS TREATMENT PLANT OPERATORS AS WELL AS THOSE NEW TO THE FIELD. THE COURSE INCLUDES AN INTRODUCTION TO TREATMENT AND BACKGROUND KNOWLEDGE FOR FURTHER TRAINING.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, PUBLICATIONS ORDER DEPT., 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008378

TITLE: TRAINING PROGRAM FOR WASTEWATER TREATMENT PLANT OPERATORS--INTERMEDIATE COURSE.

DESCRIPTOR: *AUDIOVISUAL AIDS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *POST SECONDARY EDUCATION; *SKILL DEVELOPMENT; SLIDE PROGRAMS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: VOL. A: (340 SLIDES, 9 CASSETTES, OTHER MATERIALS)--$480.00, STUDENT WORKBOOK (IN TWO PARTS)--$10.00. VOL. B: (227 SLIDES, 7 CASSETTES, OTHER MATERIAL)--$350.00, STUDENT WORKBOOK--$7.50. VOL. C: (222 SLIDES, 7 CASSETTES, ADDITIONAL MATERIAL)--$350.0

ABSTRACT: THESE MATERIALS PRESENT INFORMATION FOR AN INTERMEDIATE COURSE FOR WASTEWATER TREATMENT PLANT OPERATORS. THE COURSE PREPARES STUDENTS TO ADVANCE TO HANDS-ON AND SKILL TRAINING IN UNIT PROCESSES. IT CAN BE ADMINISTERED BY TECHNICALLY COMPETENT PERSONNEL WHO NEED NOT BE QUALIFIED INSTRUCTORS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, PUBLICATIONS ORDER DEPT. 2626 PENNSYLVANIA, NW, WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008379

TITLE: WASTE STABILIZATION PONDS TRAINING PACKAGE.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *STABILIZATION PONDS; *TRAINING PROGRAMS; WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: TRAINING PACKAGE--$16.00, ORDER E0360

ABSTRACT: THIS TRAINING PACKAGE PRESENTS INFORMATION ON WASTE STABILIZATION PONDS. THE OBJECTIVE OF THIS TRAINING PROGRAM IS TO INCREASE THE ABILITY OF THE STUDENT TO RECOGNIZE AND UNDERSTAND THE FUNCTION AND OPERATION OF FACULTATIVE WASTE STABILIZATION PONDS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, PUBLICATIONS ORDER DEPARTMENT, 2626 PENNSYVANIA AVE., NW, WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008380

TITLE: ACTIVATED SLUDGE SKILL TRAINING PACKAGE.

DESCRIPTOR: *ACTIVATED SLUDGE; FACILITIES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SKILL DEVELOPMENT; SLUDGE; *STUDY GUIDES; *TEACHING GUIDES; *TRAINING PROGRAMS; *TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: TRAINING PACKAGE: INSTRUCTORS HANDBOOK--$8.00, ORDER E0380 STUDENT WORKBOOK--$12.00, ORDER E0351

ABSTRACT: THIS INSTRUCTIONAL PACKAGE CONTINUES TRAINING FOR THE BASIC AND INTERMEDIATE COURSE, WITH EMPHASIS ON UNDERSTANDING THE FUNCTIONS AND PROCESSES OF ACTIVATED SLUDGE PLANT OPERATION. INCLUDES CHECKLISTS TO START UP, SHUT DOWN, AND TROUBLESHOOT THE SYSTEM.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, PUBLICATIONS ORDER DEPARTMENT, 2626 PENNSYLVANIA AVE., NW, WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008381

TITLE: ANAEROBIC DIGESTION SKILL TRAINING PACKAGE.

DESCRIPTOR: *ANAEROBIC DIGESTION; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; SKILL DEVELOPMENT; *STUDY GUIDES; *TEACHING GUIDES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTORS MANUAL--$12.00, ORDER E0355; STUDENT WORKBOOK--$18.00, ORDER E0356.

ABSTRACT: THIS COURSE IS DESIGNED TO PROVIDE A THOROUGH UNDERSTANDING OF THE ANAEROBIC DIGESTION PROCESS AND THE EQUIPMENT USED IN THE SYSTEM. TASKS RELATING TO THE DIGESTION SYSTEM ARE DESCRIBED IN DETAIL.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, PUBLICATIONS ORDER DEPARTMENT, 2626 PENNSYLVANIA AVE., NW, WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008382

TITLE: AUDIOVISUAL TRAINING PROGRAM FOR EXTENDED AERATION OPERATORS.

DESCRIPTOR: *AERATION; *AUDIOVISUAL AIDS; *EXTENDED AERATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *POST SECONDARY EDUCATION; SKILL DEVELOPMENT; *TRAINING PROGRAMS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR SET (77 SLIDES, 2 CASSETTES, WALL CHART AND OTHER MATERIAL)--$145.00, ORDER E0310; STUDENT MATERIALS (WORKBOOK AND CHART)--$15.00, ORDER E0311

ABSTRACT: THIS PROGRAM DEALS WITH THE PRACTICAL ASPECTS OF OPERATING A 100,000 GAL/DAY EXTENDED AERATION WASTEWATER TREATMENT PLANT. THE PROGRAM INCLUDES A TWO-PART WRITTEN SECTION AND A TWO- PART AUDIOVISUAL SECTION, WITH A HANDS-ON SKILL CHECKLIST SECTION.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, PUBLICATIONS ORDER DEPARTMENT, 2626 PENNSYLVANIA AVE., NW, WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008384

PUBLICATION DATE: APR 81

TITLE: REMOVAL OF NITRATE FROM CONTAMINATED WATER SUPPLIES FOR PUBLIC USE.

PERSONAL AUTHOR: GUTER, GERALD A.

DESCRIPTOR: CONTAMINANTS; *DENITRATION; EQUIPMENT; *ION EXCHANGE; *NITRATES; NITROGEN; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PILOT TESTS; *RESEARCH REPORTS; REVERSE OSMOSIS; *WASTEWATER TREATMENT; WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: PB82-163206

ABSTRACT: THIS REPORT COVERS THE GENERAL APPLICABILITY OF THREE TREATMENT PROCESSES FOR REMOVAL OF NITRATE FROM PUBLIC WATER SUPPLIES. EVALUATED WERE REVERSE OSMOSIS (RO), ION EXCHANGE, AND THE COMBINATION OF RO FOLLOWED BY ION EXCHANGE. FROM THIS WORK, ESTIMATES OF PRODUCT WATER QUALITY AND THE BED VOLUME CAPACITY FOR FEEDWATER OF ANY COMPOSITION CAN BE MADE. ALSO, A WORKING HYPOTHESIS WAS DEVELOPED FROM AN ANALYSIS OF THE DATA ABOUT HOW THE CHEMICAL STRUCTURE OF RESINS CAN BE PRACTICALLY ALTERED TO OBTAIN NITRATE SELECTIVITY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008388

PUBLICATION DATE: 82

TITLE: HAZARDOUS WASTE DISPOSAL - ASSESSING THE PROBLEM.

PERSONAL AUTHOR: HIGHLAND, JOSEPH H.
DESCRIPTOR: *ASSESSMENT; CASE STUDIES; CLEANUP; *CONFERENCE PROCEEDINGS; CONTAMINATION; ENVIRONMENTAL IMPACTS; *HAZARDOUS WASTES; HEALTH; INDUSTRIAL WASTES; MONITORING; PUBLIC HEALTH; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *WASTE DISPOSAL.

DESCRIPTIVE NOTE: 332P. PRICE: $49.95

ABSTRACT: THIS BOOK CONTAINS PROCEEDINGS OF A CONFERENCE ON HAZARDOUS WASTE HELD IN WASHINGTON, D. C. IN DECEMBER 1980. REPRESENTATIVES FROM ACADEMIA, GOVERNMENT, INDUSTRY, LABOR AND THE PRIVATE SECTOR PRESENTED PAPERS ON TOPICS THAT INCLUDED: (1) ASSESSMENT OF THE PROBLEM(S) AT FOUR WASTE DISPOSAL SITES; (2) THE ENVIRONMENTAL IMPACT CHARACTERIZING CONTAMINATION; (3) HEALTH EFFECTS MONITORING; (4) PROTECTING THE WORKER DURING CLEAN-UP; (5) TECHNICAL ASPECTS OF CLEAN-UP; AND (6) THE RESPONSE CAPACITY OF THE GOVERNMENT, THE PRIVATE, SECTOR, THE MEDICAL COMMUNITY AND INDUSTRY.

AVAILABILITY: ANN ARBOR SCIENCE, INC., ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

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*ASSESSMENT (7) EW008094 EW008134 EW008164 EW008190 EW008298 EW008337 EW008388
*ATMOSPHERIC SYSTEMS (1) EW008366

*ATTITUDES	(3)	EW008055 EW008059 EW008325
*AUDIOVISUAL AIDS	(8)	EW007832 EW008035 EW008189 EW008372 EW008373 EW008377 EW008378 EW008382
*AUDITS	(1)	EW007660
*AUTOHEATED THERMOPHILIC AEROBIC DIGESTION	(1)	EW008220
*AWWA	(2)	EW007845 EW008241
*BACKWASH	(1)	EW008161
*BACTERIA	(6)	EW008088 EW008162 EW008178 EW008255 EW008328 EW008341
BACTERIA	(4)	EW008148 EW008215 EW008314 EW008324
*BANKS	(1)	EW008243
*BARDENPHO PROCESS	(1)	EW008128
*BARIUM	(1)	EW008247
*BASIC LANGUAGE	(1)	EW008283
*BEGINNING TRAINERS	(1)	EW007855
*BEHAVIORIAL CHANGES	(1)	EW006694
*BENZIDINE	(1)	EW008097
*BIBLIOGRAPHIES	(57)	EW007940 EW008081 EW008082 EW008086 EW008087 EW008088 EW008105 EW008106 EW008107 EW008110 EW008111 EW008148 EW008149 EW008150 EW008151 EW008152 EW008153 EW008154 EW008304 EW008306 EW008307 EW008308 EW008309 EW008311 EW008312 EW008313 EW008314 EW008315 EW008316 EW008318 EW008319 EW008320 EW008321 EW008323 EW008324 EW008325 EW008326 EW008327 EW008328 EW008329 EW008330 EW008331 EW008332 EW008333 EW008334 EW008335 EW008336 EW008343 EW008344 EW008345 EW008346 EW008347 EW008349 EW008351 EW008354 EW008355 EW008356
BIBLIOGRAPHIES	(2)	EW007938 EW008368
*BIF PROCESS	(1)	EW008238
BIOCHEMISTRY	(1)	EW008199
*BIODEGRADATION	(1)	EW008324
BIODEGRADATION	(1)	EW008365
*BIODETERIORATION	(1)	EW008148
*BIOLOGICAL ACTIVATED CARBON	(1)	EW008364
*BIOLOGICAL CONTACTORS	(1)	EW007936
*BIOLOGICAL FACTORS	(1)	EW008107
BIOLOGICAL OXYGEN DEMAND	(1)	EW008318
*BIOLOGICAL PROCESSES	(1)	EW008253
BIOLOGICAL SCIENCES	(1)	EW008190

*BIOLOGICAL TREATMENT	(7)	EW007919 EW008100 EW008128 EW008153 EW008202 EW008217 EW008312
BIOLOGICAL TREATMENT	(2)	EW008311 EW008356
*BIOLOGY	(4)	EW008227 EW008306 EW008334 EW008336
BIOLOGY	(4)	EW008081 EW008088 EW008201 EW008329
*BIOOXIDATION	(1)	EW008133
*BONDS	(1)	EW008242
BONDS	(1)	EW008244
*BUILDINGS	(1)	EW008144
*BULKING	(1)	EW008371
*CALCULATIONS	(1)	EW007849
*CALCULATOR PROGRAMS	(1)	EW007929
*CALCULATORS	(1)	EW007929
*CALIFORNIA	(2)	EW007854 EW008171
*CAPITAL IMPROVEMENTS	(2)	EW008242 EW008244
CARBON ADSORPTION	(1)	EW008196
CARBON DIOXIDE	(1)	EW008340
*CARBON FILTERS	(1)	EW007920
*CARBON REGENERATION	(1)	EW007005
*CAREER COUNSELING	(1)	EW006692
*CAREER DEVELOPMENT	(4)	EW006691 EW006692 EW006693 EW006694
*CASE HISTORIES	(2)	EW008365 EW008368
*CASE STUDIES	(62)	EW007005 EW007007 EW007846 EW007854 EW007919 EW007951 EW008051 EW008052 EW008053 EW008070 EW008081 EW008100 EW008109 EW008117 EW008118 EW008119 EW008120 EW008121 EW008127 EW008128 EW008129 EW008131 EW008135 EW008142 EW008144 EW008155 EW008171 EW008172 EW008173 EW008176 EW008179 EW008181 EW008183 EW008195 EW008197 EW008199 EW008203 EW008215 EW008216 EW008217 EW008225 EW008226 EW008228 EW008230 EW008231 EW008233 EW008235 EW008237 EW008238 EW008239 EW008240 EW008247 EW008249 EW008251 EW008252 EW008300 EW008310 EW008313 EW008317 EW008339 EW008364 EW008369
CASE STUDIES	(8)	EW004778 EW007009 EW008164 EW008220 EW008285 EW008293 EW008371 EW008388
*CATION EXCHANGE	(1)	EW008316
*CERTIFICATION	(1)	EW008116
*CHANGE	(1)	EW007856
CHEMICAL ANALYSIS	(1)	EW008228
*CHEMICAL INDUSTRY	(1)	EW008311

CHEMICAL INDUSTRY	(1)	EW008087
*CHEMICAL OXYGEN DEMAND	(1)	EW008136
*CHEMICAL REACTIONS	(1)	EW008104
CHEMICAL REACTIONS	(1)	EW008332
*CHEMICALS	(12)	EW008065 EW008066 EW008067 EW008068 EW008069 EW008070 EW008072 EW008074 EW008075 EW008152 EW008229 EW008311
CHEMICALS	(1)	EW008373
*CHEMICAL TREATMENT	(1)	EW008153
CHEMICAL TREATMENT	(2)	EW008216 EW008328
*CHEMISTRY	(3)	EW008073 EW008308 EW008340
CHLORAMINES	(1)	EW008125
*CHLORINATION	(3)	EW008179 EW008229 EW008340
CHLORINATION	(2)	EW008111 EW008228
*CHLORINE	(4)	EW007933 EW008111 EW008123 EW008194
CHLORINE	(3)	EW008125 EW008339 EW008340
*CHLORINE DIOXIDE	(4)	EW007933 EW008111 EW008228 EW008229
CHLORINE DIOXIDE	(1)	EW008125
*CHLOROPHYLL	(1)	EW008248
*CHROMATOGRAPHY	(2)	EW008345 EW008347
CHROMATOGRAPHY	(6)	EW008097 EW008098 EW008099 EW008209 EW008211 EW008316
*CITIZEN INVOLVEMENT	(1)	EW008035
*CITY SERVICES	(1)	EW008240
*CLARIFICATION	(1)	EW008129
CLEANUP	(1)	EW008388
*COAGULATION	(1)	EW008087
COAGULATION	(1)	EW008307
COAL	(2)	EW008149 EW008150
*COASTAL AREAS	(1)	EW008207
COASTAL SEAWATER	(1)	EW008333
*COASTAL ZONES	(3)	EW008106 EW008107 EW008148
*COKE	(1)	EW008216
*COKEMAKING	(1)	EW008217
COLIFORM	(1)	EW008230

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*COLIFORM BACTERIA	(1)	EW008162
*COLIFORMS	(1)	EW008178
*COLIPHAGES	(1)	EW008077
*COLLECTION SYSTEMS	(1)	EW008176
*COLLEGE SCIENCE	(1)	EW008062
*COLORADO	(1)	EW008118
*COMBINED SEWERS	(3)	EW008130 EW008176 EW008249
*COMBUSTIBLE MATERIALS	(1)	EW008076
*COMMUNICATIONS	(2)	EW008035 EW008189
*COMPLIANCE	(1)	EW007660
*COMPOSTING	(4)	EW007008 EW008181 EW008236 EW008251
*COMPRESSORS	(1)	EW008301
*COMPUTER APPLICATIONS	(11)	EW007834 EW007849 EW007929 EW008095 EW008155 EW008157 EW008163 EW008223 EW008235 EW008249 EW008361
COMPUTER APPLICATIONS	(3)	EW008061 EW008126 EW008176
*COMPUTER ASSISTED INSTRUCTION	(1)	EW008062
*COMPUTER PROGRAMS	(4)	EW007834 EW007849 EW008245 EW008283
COMPUTER PROGRAMS	(2)	EW008079 EW008080
*COMPUTERS	(4)	EW007941 EW008062 EW008235 EW008361
COMPUTERS	(1)	EW008283
*COMPUTER SCIENCE	(1)	EW008283
*COMPUTER SOFTWARE	(2)	EW007849 EW008062
*CONFERENCE PROCEEDINGS	(8)	EW004778 EW008061 EW008190 EW008285 EW008370 EW008371 EW008376 EW008388
CONFERENCE PROCEEDINGS	(1)	EW008090
*CONFLICT RESOLUTION	(1)	EW008059
*CONNECTICUT	(1)	EW008181
*CONSERVATION	(3)	EW007412 EW008268 EW008352
CONSERVATION	(2)	EW008063 EW008344
*CONSTRUCTION	(8)	EW007932 EW007939 EW008145 EW008242 EW008244 EW008252 EW008264 EW008342
CONSTRUCTION	(2)	EW007919 EW008202
CONSTRUCTION GRANTS	(1)	EW008192

*CONTAMINANT REMOVAL	(1)	EW007934
*CONTAMINANTS	(3)	EW007934 EW008219 EW008338
CONTAMINANTS	(2)	EW007920 EW008384
*CONTAMINATION	(6)	EW008124 EW008158 EW008159 EW008205 EW008304 EW008326
CONTAMINATION	(4)	EW008219 EW008308 EW008368 EW008388
*CONTINUOUS FLOW ANALYZERS	(1)	EW008095
*CONTINUOUS FLOW ANALYZER SYSTEM	(2)	EW008079 EW008080
*CONTROLS	(1)	EW008301
*COOLING	(1)	EW008142
*CORROSION	(1)	EW008124
*COST BENEFIT	(1)	EW003186
COST BENEFIT	(1)	EW008185
*COST EFFECTIVENESS	(19)	EW007832 EW007928 EW008060 EW008089 EW008121 EW008122 EW008128 EW008142 EW008143 EW008144 EW008155 EW008176 EW008177 EW008186 EW008294 EW008295 EW008303 EW008310 EW008353
COST EFFECTIVENESS	(4)	EW008127 EW008191 EW008231 EW008348
*COSTS	(15)	EW008052 EW008105 EW008177 EW008181 EW008183 EW008186 EW008236 EW008237 EW008238 EW008246 EW008261 EW008263 EW008268 EW008319 EW008360
COSTS	(9)	EW007008 EW008086 EW008110 EW008121 EW008196 EW008205 EW008228 EW008230 EW008320
COURSE CONTENT	(1)	EW008058
COURSE DEVELOPMENT	(1)	EW007855
*COURSE OUTLINES	(1)	EW007736
*CRITERIA	(1)	EW008134
*CURRICULUM DEVELOPMENT	(2)	EW008056 EW008060
*CUSTOMER RELATIONS	(1)	EW008157
DATA	(1)	EW007643
*DATA ACQUISITION	(2)	EW007643 EW008095
*DATA ANALYSIS	(7)	EW007834 EW007929 EW008162 EW008191 EW008223 EW008288 EW008293
*DATA BASES	(2)	EW008232 EW008241
DATA BASES	(1)	EW008126
*DATA COLLECTION	(6)	EW008079 EW008080 EW008164 EW008184 EW008213 EW008232
*DATA MANAGEMENT	(1)	EW008293

*DEAUTHORIZATION PROGRAM (1) EW008092
*DEBT CAPITAL (1) EW008244
*DECHLORINATION (1) EW008231
*DECISION-MAKING (1) EW008191
DEMOGRAPHY (1) EW008336
*DENITRATION (1) EW008384
*DEPARTMENT OF INTERIOR (1) EW007412
*DESALINATION (1) EW008234
DESALINATION (2) EW008063 EW008307
*DESIGN (28) EW007008 EW007009 EW007847 EW007919 EW007927 EW007928 EW007932
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EW008264 EW008269 EW008317 EW008342 EW008362
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EW008285 EW008335 EW008356 EW008359 EW008361
*DESINFECTION (1) EW008091
*DETECTION (4) EW007926 EW008088 EW008098 EW008151
*DETECTION TECHNIQUES (1) EW008328
*DETENTION BASINS (1) EW007847
*DETERGENTS (2) EW008309 EW008346
*DETOXIFICATION (1) EW008071
*DEVELOPING NATIONS (2) EW008359 EW008360
*DEVELOPMENT (1) EW008370
*DIFFUSERS (1) EW007854
*DIGESTERS (1) EW008174
*DIRECT FILTRATION (1) EW008161
*DISINFECTION (17) EW007009 EW007933 EW008111 EW008112 EW008113 EW008123 EW008125
EW008179 EW008194 EW008201 EW008228 EW008229 EW008230 EW008266 EW008267
EW008339 EW008340
*DISPERSAL MECHANICS (1) EW008222
*DISPOSAL METHODS (1) EW008071
*DISSOLVED GASES (1) EW008174
*DISSOLVED OXYGEN (1) EW008253
DOMESTIC WASTES (1) EW008356
*DREDGING (1) EW008107

*DRINKING WATER (33) EW007845 EW007846 EW007850 EW007851 EW007853 EW007920 EW007933
EW007934 EW008048 EW008050 EW008053 EW008054 EW008112 EW008124 EW008125
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EW008247 EW008265 EW008266 EW008267 EW008268 EW008310 EW008338 EW008355
EW008364 EW008369

DROUGHT (1) EW008063

*EARTHQUAKES (1) EW008093

*ECOLOGICAL FACTORS (3) EW008190 EW008207 EW008306

ECOLOGICAL FACTORS (2) EW008221 EW008308

*ECOLOGY (3) EW008078 EW008329 EW008336

*ECONOMIC FACTORS (16) EW007846 EW007850 EW007851 EW008122 EW008193 EW008205 EW008220
EW008242 EW008243 EW008244 EW008245 EW008246 EW008251 EW008300 EW008310
EW008364

ECONOMIC FACTORS (13) EW007005 EW007008 EW008121 EW008158 EW008191 EW008192 EW008247
EW008252 EW008298 EW008320 EW008344 EW008359 EW008362

*ECONOMICS (10) EW007935 EW007938 EW007939 EW008084 EW008181 EW008183 EW008234
EW008261 EW008268 EW008370

ECONOMICS (5) EW008082 EW008147 EW008149 EW008150 EW008154

ECOSYSTEM DYNAMICS (1) EW008207

*ECOSYSTEMS (2) EW008078 EW008207

*EDUCATION (1) EW008055

*EDUCATIONAL NEEDS (2) EW006691 EW008189

*EDUCATIONAL OBJECTIVES (1) EW006691

*EDUCATIONAL PROGRAMS (1) EW006693

*EDUCATIONAL TECHNOLOGY (3) EW007832 EW007941 EW008062

*EFFICIENCY (2) EW007937 EW008240

EFFICIENCY (1) EW007856

*EFFLUENTS (15) EW008084 EW008097 EW008098 EW008099 EW008126 EW008133 EW008177
EW008210 EW008214 EW008225 EW008226 EW008230 EW008262 EW008286 EW008339

EFFLUENTS (10) EW008127 EW008129 EW068136 EW008151 EW008194 EW008253 EW008299
EW008320 EW008363 EW008368

*ELECTRICITY (2) EW007736 EW008085

*EMERGENCIES (1) EW008050

*EMERGENCY PLANS (1) EW008050

*EMERGENCY RESPONSE (1) EW008156

*EMERGENCY SERVICES (1) EW008240

*EMPLOYEE SKILLS (1) EW008164

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*EMPLOYMENT QUALIFICATIONS                 (1)       EW008116
*EMULSION                                  (1)       EW008175

*ENERGY                                    (5)       EW008234  EW008261  EW008303  EW008354  EW008374

*ENERGY AUDITS                             (2)       EW008261  EW008374

*ENERGY CONSERVATION                       (12)      EW007854  EW007938  EW007939  EW008142  EW008143  EW008144  EW008183
                                           EW008234  EW008236  EW008261  EW008303  EW008374

 ENERGY CONSERVATION                       (1)       EW008285

*ENERGY CONSUMPTION                        (1)       EW008085

*ENERGY DEVELOPMENT                        (1)       EW008190

 ENFORCEMENT                               (1)       EW008082

*ENGINEERING                               (7)       EW007849  EW008115  EW008118  EW008145  EW008220  EW008317  EW008364

 ENGINEERING                               (9)       EW007919  EW007928  EW008087  EW008090  EW008104  EW008164  EW008293
                                           EW008298  EW008335

*ENVIRONMENT                               (3)       EW007660  EW008081  EW008376

*ENVIRONMENTAL CHEMISTRY                   (1)       EW008072

*ENVIRONMENTAL ENGINEERING                 (2)       EW008115  EW008365

 ENVIRONMENTAL ENGINEERING                 (1)       EW008368


*ENVIRONMENTAL IMPACTS                     (14)      EW008094  EW008107  EW008149  EW008150  EW008221  EW008236  EW008306
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 ENVIRONMENTAL IMPACTS                     (5)       EW008086  EW008320  EW008333  EW008343  EW008388

 ENVIRONMENTAL IMPACT STATEMENTS           (1)       EW008192

 ENVIRONMENTAL INFLUENCES                  (1)       EW007412

*ENVIRONMENTAL LEGISLATION                 (1)       EW008082

*ENVIRONMENTAL PROTECTION                  (1)       EW008192

*ENVIRONMENTAL PROTECTION AGENCY           (5)       EW008079  EW008080  EW008126  EW008127  EW008134

 ENVIRONMENTAL PROTECTION AGENCY           (1)       EW008154

*ENVIRONMENTAL QUALITY                     (3)       EW008192  EW008337  EW008366

*ENVIRONMENTAL RESEARCH                    (1)       EW008333

*EPA                                       (1)       EW008265

 EPOXY                                     (1)       EW008117

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EQUIPMENT MAINTENANCE (1) EW008363

*ESTUARIES (1) EW008106

*EUROPE (1) EW008267

EUTROPHICATION (1) EW008309

*EVALUATION (11) EW008060 EW008989 EW008094 EW008147 EW008184 EW008185 EW008187 EW008188 EW008210 EW008342 EW008348

EVALUATION (5) EW006691 EW007855 EW008058 EW008064 EW008337

*EXTENDED AERATION (1) EW008382

*FACILITIES (36) EW007005 EW007009 EW007846 EW007847 EW007848 EW007851 EW007853 EW007906 EW007919 EW007931 EW007932 EW007939 EW007950 EW008048 EW008049 EW008052 EW008055 EW008083 EW008085 EW008093 EW008096 EW008109 EW008142 EW008145 EW008182 EW008252 EW008263 EW008264 EW008285 EW008298 EW008301 EW008302 EW008303 EW008310 EW008342 EW008370

FACILITIES (9) EW008144 EW008171 EW008176 EW008202 EW008249 EW008284 EW008356 EW008365 EW008380

*FARMS (1) EW008351

*FECAL COLIFORMS (1) EW008178

*FECAL STREPTOCOCCI (1) EW008341

*FEDERAL GOVERNMENT (4) EW008192 EW008193 EW008293 EW008313

FEDERAL GOVERNMENT (1) EW007412

*FEDERAL PROGRAMS (1) EW008092

*FEDERAL ROLE (2) EW007845 EW008265

*FEEDBACK (1) EW008184

FEEDLOTS (1) EW008351

FERTILIZERS (1) EW008311

*FILMS (2) EW008372 EW008373

*FILTERS (5) EW007920 EW008162 EW008299 EW008318 EW008319

FILTERS (3) EW008077 EW008129 EW008321

*FILTER SCREENS (1) EW008237

*FILTRATION (5) EW008161 EW008198 EW008237 EW008266 EW008299

*FILTRATION SYSTEMS (1) EW008054

*FINANCES (1) EW007851

*FINANCING (5) EW007846 EW008242 EW008243 EW008244 EW008245

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*FLAMMABLE MATERIALS (1) EW008076
*FLOCCULATION (1) EW008087
FLOCCULATION (2) EW008307 EW008318
FLOODS (1) EW008315
*FLORIDA (2) EW008035 EW008054
*FLOTATION (1) EW008087
FLOTATION (1) EW008310
*FLOW ANALYSIS (3) EW008079 EW008080 EW008095
*FLOW ANALYZERS (1) EW008095
*FLOW MEASUREMENT (3) EW008679 EW008080 EW008177
*FORECASTING (2) EW008245 EW008313
*FOSSIL FUELS (1) EW008347
*FREE RESIDUAL CHLORINE (1) EW008123
GAS CHROMATOGRAPHY (2) EW008061 EW008151
*GAS DETECTION (1) EW008375
*GASES (1) EW008375
*GEORGIA (1) EW008177
*GOALS (4) EW008060 EW008184 EW008187 EW008188
*GOVERNMENT (1) EW008235
*GOVERNMENT AGENCIES (1) EW007412
*GOVERNMENT ROLE (1) EW008182
*GRANULAR ACTIVATED CARBON (1) EW008267
*GRAPHICAL ANALYSIS (2) EW008287 EW008288
*GRAVITY FLOW (1) EW007849
*GRINDER PUMPS (1) EW007950
*GROUNDWATER (7) EW008158 EW008159 EW008247 EW008285 EW008304 EW008326 EW008330
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EW008084 EW008147 EW008297 EW008361
GUIDES (3) EW008068 EW008069 EW008359

*GUMBEL PROBABILITY PAPER (1) EW008288
*HABITATS (1) EW008094
*HALOETHERS (1) EW008208
*HANDBOOKS (13) EW007643 EW007660 EW008067 EW008069 EW008076 EW008104 EW008112 EW008113 EW008114 EW008221 EW008283 EW008337 EW008363
*HANDLING (2) EW008065 EW008067
*HAZARD ASSESSMENT (1) EW008134
*HAZARDOUS MATERIALS (8) EW008065 EW008066 EW008067 EW008068 EW008069 EW008070 EW008072 EW008204
HAZARDOUS MATERIALS (5) EW008074 EW008075 EW008170 EW008192 EW008373
*HAZARDOUS SUBSTANCES (1) EW008205
*HAZARDOUS WASTES (2) EW008365 EW008388
HAZARDOUS WASTES (2) EW008115 EW008332
*HEALTH (1) EW008251
HEALTH (1) EW008388
HEALTH ASPECTS (1) EW008335
*HEALTH EFFECTS (2) EW008229 EW008355
HEALTH EFFECTS (2) EW008114 EW008307
*HEALTH HAZARDS (1) EW008156
*HEATING (2) EW008085 EW008142
*HEAVY METALS (4) EW008088 EW008198 EW008232 EW008308
HEAVY METALS (6) EW008151 EW008152 EW008314 EW008323 EW008332 EW008343
HIGHER EDUCATION (1) EW008062
*HIGHWAY DEVELOPMENT (1) EW008035
*HISTORY (1) EW008368
HOSPITALS (1) EW008235

*HUMAN RESOURCES DEVELOPMENT (3) EW007855 EW007856 EW007857
*HYDRAULICS (1) EW007849
HYDRAULICS (1) EW008368
HYDROCARBONS (1) EW008148
HYDROGEOLOGY (1) EW007643
*HYDROLOGY (4) EW007643 EW008315 EW008330 EW008349

HYDROLOGY (3) EW007006 EW008293 EW008304
*HYDROPERM (1) EW008198

*ILLINOIS (1) EW008237

*INCINERATION (1) EW008071

*INDEXES (1) EW008297

*INDICATORS (1) EW008341

*INDUSTRIAL EDUCATION (1) EW008056

*INDUSTRIAL SAFETY (2) EW008074 EW008075

*INDUSTRIAL WASTES (26) EW007005 EW007852 EW008084 EW008086 EW008087 EW008097 EW008098
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EW008208 EW008209 EW008216 EW008217 EW008225 EW008232 EW008311 EW008320
EW008335 EW008343 EW008364

INDUSTRIAL WASTES (9) EW008136 EW008151 EW008160 EW008198 EW008285 EW008327 EW008345
EW008356 EW008388

INDUSTRY (2) EW008154 EW008325

*INFILTRATION (1) EW008239

*INFLOW (1) EW008051

*INFLOW PREVENTION (1) EW008051

*INFLUENTS (1) EW008232

*INFORMATION DISSEMINATION (2) EW007832 EW008241

*INFORMATION RETREIVAL (1) EW008241

*INFORMATION SOURCES (3) EW008066 EW008232 EW008297

INFORMATION SOURCES (1) EW008067

*INFORMATION SYSTEMS (2) EW008157 EW008163

*INORGANIC CONTAMINANTS (1) EW007934

*INORGANICS (1) EW008219

*INSTALLATION (1) EW007927

INSTALLATION (1) EW008361

*INSTRUCTION (7) EW007832 EW007857 EW008056 EW008057 EW008058 EW008180 EW008189

INSTRUCTION (1) EW007855

*INSTRUCTIONAL IMPROVEMENT (2) EW007855 EW007857

*INSTRUCTIONAL MATERIALS (49) EW007660 EW007736 EW007941 EW008056 EW008062 EW008067 EW008068
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INSTRUCTIONAL MATERIALS	(1)	EW004778
*INSTRUMENTATION	(8)	EW007926 EW007930 EW007937 EW007940 EW008256 EW008301 EW008358 EW008375
*INTERNATIONAL PROGRAMS	(1)	EW008359
*INVENTORIES	(1)	EW008164
*INVENTORY CONTROL	(1)	EW007931
*ION EXCHANGE	(1)	EW008384
ION EXCHANGE	(1)	EW008152
*ION EXCHANGE RESINS	(1)	EW008332
*IRRIGATION	(2)	EW008118 EW008226
*IRRIGATION SYSTEMS	(1)	EW007006
ISOPHORONE	(1)	EW008146
*JET-VACUUM MACHINES	(1)	EW008264
*JOB SATISFACTION	(1)	EW006693
*JOB SKILLS	(4)	EW006691 EW006692 EW006693 EW006694
*KINETICS	(1)	EW008172
*LABORATORIES	(1)	EW008116
*LABORATORY PROCEDURES	(21)	EW008061 EW008064 EW008073 EW008077 EW008079 EW008080 EW008088 EW008097 EW008098 EW008099 EW008123 EW008136 EW008146 EW008151 EW008178 EW008208 EW008248 EW008256 EW008341 EW008345 EW008347
*LABORATORY SAFETY	(6)	EW008065 EW008066 EW008067 EW008073 EW008372 EW008373
LABORATORY SAFETY	(1)	EW008064
*LABORATORY STUDIES	(1)	EW008196
LABORATORY TECHNIQUES	(1)	EW008115
*LABORATORY TRAINING	(1)	EW008116
*LAGOONS	(2)	EW007852 EW098356
LAGOONS	(1)	EW008153
LAKES	(4)	EW008153 EW008323 EW008329 EW008333
*LAND APPLICATION	(12)	EW007006 EW007832 EW007951 EW008173 EW008181 EW008203 EW008215 EW008226 EW008338 EW008250 EW008251 EW008353
LAND APPLICATION	(2)	EW008122 EW008212
*LAND DISPOSAL	(2)	EW007848 EW008071
LANDFALLS	(1)	EW008221

*LAND RECLAMATION	(3)	EW008149 EW008150 EW008203
*LAND USE	(4)	EW007848 EW008149 EW008150 EW008190
LAND USE	(3)	EW007412 EW008107 EW008120
LAW ENFORCEMENT	(1)	EW008235
*LAWS	(3)	EW007660 EW008082 EW008313
LEACHING	(1)	EW008330
*LEAD	(1)	EW008124
*LEAD-ACID WASTES	(1)	EW008198
*LEADERSHIP	(1)	EW006692
*LEARNING	(5)	EW008057 EW008058 EW008062 EW008185 EW008188
*LEARNING OUTCOMES	(1)	EW008188
*LEARNING STYLES	(1)	EW008058
LEASES	(1)	EW008354
*LEGAL ASPECTS	(5)	EW008118 EW008119 EW008120 EW008154 EW008325
LEGAL ASPECTS	(3)	EW008115 EW008149 EW008150
*LEGAL FACTORS	(1)	EW008300
*LEGISLATION	(5)	EW008082 EW008210 EW008265 EW008286 EW008325
LEGISLATION	(1)	EW008369
LIBRARIES	(1)	EW008235
*LIGHTING SYSTEMS	(1)	EW008143
LIGHTS	(1)	EW008143
*LIPIDS	(1)	EW008175
LIQUID WASTES	(1)	EW008327
*LIVESTOCK	(1)	EW008351
*LOCAL GOVERNMENTS	(2)	EW008147 EW008313
*MAINTENANCE	(17)	EW007927 EW007930 EW007931 EW007935 EW007937 EW008048 EW008049 EW008051 EW008117 EW008237 EW008239 EW008263 EW008264 EW008269 EW008301 EW008342 EW008362
MAINTENANCE	(5)	EW008083 EW008230 EW008249 EW008284 EW008356
*MANAGEMENT	(60)	EW006691 EW006692 EW006693 EW006694 EW007008 EW007412 EW007834 EW007855 EW007856 EW007857 EW007930 EW007932 EW007940 EW008052 EW008059 EW008063 EW008068 EW008069 EW008084 EW008105 EW008109 EW008116 EW008120 EW008121 EW008126 EW008130 EW008144 EW008147 EW008156 EW008157 EW008176

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EW008351 EW008360 EW008361 EW008366 EW008370

MANAGEMENT (17) EW004778 EW007007 EW007009 EW007951 EW008083 EW008119 EW008163
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EW008359 EW008369

*MANAGEMENT TRAINING (1) EW008187

*MANGROVE ECOSYSTEMS (1) EW008207

*MANHOLES (1) EW008051

*MANUALS (6) EW008065 EW008066 EW008083 EW008145 EW008180 EW008317

*MARINE ENVIRONMENT (5) EW008090 EW008178 EW008221 EW008222 EW008354

*MARKETING (1) EW008251

*MASSACHUSETTS (1) EW008183

MASSACHUSETTS (1) EW008235

MASS SPECTROMETRY (1) EW008061

*MATHEMATICAL APPLICATIONS (2) EW007929 EW008288

*MATHEMATICAL MODELS (5) EW008078 EW008085 EW008096 EW008172 EW008212

MATHEMATICAL MODELS (1) EW008326

*MEASUREMENT (5) EW007643 EW008075 EW008095 EW008248 EW008337

MEASUREMENT TECHNIQUES (1) EW008329

*MEAT PROCESSING PLANTS (1) EW007852

MEMBRANE FILTERS (1) EW008162

*MERCURY (1) EW008136

MERCURY (1) EW008311

MESOPHILIC DIGESTION (1) EW008233

METABOLIC PRODUCTS (1) EW008334

*METAL INDUSTRIES (1) EW008343

*METAL RECOVERY (1) EW008136

*METALS (2) EW007934 EW008308

METALS (1) EW008343

*METER READING (1) EW008155

*METERS (1) EW008155

*MICROBIOLOGY (1) EW008306

MICROBIOLOGY	(2)	EW008335 EW008371
*MICROCOMPUTERS	(2)	EW007849 EW007941
MICROFILTERS	(1)	EW008198
*MICROORGANISMS	(1)	EW008255
MICROORGANISMS	(2)	EW008328 EW008334
*MICROPOLLUTANTS	(2)	EW008061 EW008339
*MICROPROCESSORS	(1)	EW008163
MINERALS	(1)	EW007412
*MINING	(3)	EW008149 EW008150 EW008323
*MODELING	(6)	EW008078 EW008177 EW008223 EW008227 EW008245 EW008353
MODELING	(4)	EW008085 EW008212 EW008329 EW008331
*MODELS	(7)	EW008122 EW008204 EW008293 EW008315 EW008353 EW008360 EW008366
*MODULES	(1)	EW008056
*MONITORING	(14)	EW007926 EW008075 EW008079 EW008080 EW008126 EW008127 EW008163 EW008210 EW008324 EW008331 EW008333 EW008343 EW008358 EW008375
MONITORING	(8)	EW008083 EW008109 EW008135 EW008170 EW008314 EW008363 EW008365 EW008388
*MORALE	(1)	EW008059
*MOTORS	(2)	EW007937 EW008301
*MOUNTAIN MEADOWS	(1)	EW008226
*MULTIMEDIA INSTRUCTION	(1)	EW007832
*MUNICIPALITIES	(6)	EW007008 EW008083 EW008118 EW008122 EW008127 EW008302
MUNICIPALITIES	(5)	EW008100 EW008133 EW008146 EW008177 EW008364
*MUNICIPAL WASTES	(7)	EW007006 EW008203 EW008208 EW008209 EW008214 EW008251 EW008335
MUNICIPAL WASTES	(9)	EW008097 EW008098 EW008099 EW008195 EW008201 EW008226 EW008233 EW008250 EW008356
*MUTAGENS	(2)	EW008214 EW008339
*NATURAL GAS	(1)	EW008183
*NATURAL RESOURCES	(8)	EW007412 EW008063 EW008118 EW008119 EW008120 EW008121 EW008122 EW008193
NATURAL RESOURCES	(1)	EW008190
*NATURAL SYSTEMS	(1)	EW008366
*NEEDS	(1)	EW008193

*NEEDS ASSESSMENT	(2)	EW007906	EW008170		
NEUTRON ACTIVATION	(1)	EW008151			
*NITRATES	(1)	EW008384			
NITRIFICATION	(1)	EW008202			
NITROAROMATIC COMPOUNDS	(1)	EW008146			
*NITROGEN	(2)	EW008199	EW008256		
NITROGEN	(2)	EW008318	EW008384		
*NITROGEN FIXATION	(1)	EW008324			
*NITROSAMINES	(1)	EW008099			
*NONPOINT POLLUTION	(3)	EW008094	EW008223	EW008351	
*NONPOINT SOURCE POLLUTION	(3)	EW008054	EW008295	EW008331	
*NORTH DAKOTA	(1)	EW008035			
*NORWAY	(1)	EW008182			
*NPDES	(3)	EW008126	EW008210	EW008286	
NUCLEAR POWER	(1)	EW008347			
*NUTRIENTS	(2)	EW008173	EW008215		
NUTRIENTS	(4)	EW008107	EW008152	EW008199	EW008248
*OBJECTIVES	(2)	EW007845	EW008060		
OBJECTIVES	(1)	EW007850			
*OCCUPATIONAL EDUCATION	(1)	EW008056			
*OCEAN DISPOSAL	(1)	EW008255			
*OCEAN DUMPING	(1)	EW008327			
*OCEANOGRAPHY	(2)	EW008090	EW008106		
*OCEANS	(3)	EW008090	EW008255	EW008327	
*ODOR CONTROL	(1)	EW007007			
*ODORS	(3)	EW007007	EW007852	EW008114	
*OFFSHORE DRILLING	(1)	EW008354			
*OHIO	(1)	EW008264			
*OHIO RIVER VALLEY	(1)	EW007906			
OIL	(1)	EW008314			
OIL DRILLING	(1)	EW008347			
OIL RECOVERY	(1)	EW008321			

*OIL RESIDUES	(1)	EW008306
OIL SLICKS	(1)	EW008222
*OIL SPILLS	(12)	EW007926 EW008070 EW008081 EW008110 EW008148 EW008154 EW008197 EW008222 EW008306 EW008321 EW008325 EW008334
*OIL-WATER SEPARATION	(1)	EW008110
*OIL-WATER SEPARATORS	(1)	EW008321
*OIL WELLS	(1)	EW008354
*ONSITE TREATMENT	(2)	EW008205 EW008376
*ON-THE-JOB TRAINING	(1)	EW007855
*OPEN TANK SYSTEM	(1)	EW008195
*OPERATIONS (WASTEWATER)	(90)	EW004778 EW007005 EW007006 EW007007 EW007008 EW007009 EW007834 EW007852 EW007931 EW007936 EW007937 EW007939 EW007940 EW007951 EW008049 EW008052 EW008055 EW008064 EW008083 EW008084 EW008085 EW008087 EW008089 EW008091 EW008096 EW008103 EW008105 EW008112 EW008113 EW008128 EW008129 EW008131 EW008133 EW008136 EW008147 EW008170 EW008171 EW008172 EW008174 EW008175 EW008176 EW008177 EW008180 EW008181 EW008182 EW008195 EW008198 EW008200 EW008201 EW008202 EW008216 EW008217 EW008230 EW008233 EW008236 EW008237 EW008238 EW008252 EW008253 EW008261 EW008262 EW008263 EW008264 EW008269 EW008284 EW008285 EW008299 EW008301 EW008302 EW008311 EW008312 EW008316 EW008317 EW008318 EW008319 EW008342 EW008356 EW008358 EW008362 EW008363 EW008371 EW008374 EW008376 EW008377 EW008378 EW008379 EW008380 EW008381 EW008382 EW008384
*OPERATIONS (WATER)	(24)	EW007853 EW007854 EW007934 EW007935 EW007937 EW007938 EW007940 EW008064 EW008100 EW008109 EW008121 EW008156 EW008160 EW008161 EW008163 EW008179 EW008234 EW008247 EW008261 EW008267 EW008269 EW008284 EW008359 EW008384
*OPERATOR TRAINING	(5)	EW004778 EW008180 EW008377 EW008378 EW008382
*OREGON	(1)	EW007847
*ORGANIC CHEMISTRY	(1)	EW008340
*ORGANIC COMPOUNDS	(6)	EW007920 EW008061 EW008091 EW008158 EW008159 EW008218
ORGANIC COMPOUNDS	(1)	EW008204
ORGANIZATIONAL EFFECTIVENESS	(1)	EW007856
*ORGANIZATIONAL PROBLEMS	(1)	EW008187
*ORGANIZATIONAL SETTING	(1)	EW008187
*ORGANIZATIONAL THEORIES	(1)	EW007856
ORIENTATION PROGRAMS	(1)	EW008286
OUTER CONTINENTAL SHELF	(1)	EW008221
*OVERFLOWS	(1)	EW008176

*OVERLAND FLOW	(1)	EW008199
*OXIDATION	(3)	EW008133 EW008238 EW008356
*OXIDATION DITCHES	(1)	EW008362
*OXYGEN-ACTIVATED SLUDGE	(1)	EW008195
OXYGEN-ACTIVATED SLUDGE	(1)	EW008200
*OXYGEN TRANSFER	(1)	EW007854
*OZONATION	(1)	EW008091
OZONATION	(4)	EW008104 EW008112 EW008113 EW008114
*OZONE	(8)	EW007933 EW008104 EW008112 EW008113 EW008114 EW008194 EW008266 EW008339
OZONE	(2)	EW008091 EW008125
*PAINT	(1)	EW008133
*PAPERBOARD INDUSTRY	(1)	EW008225
*PAPER INDUSTRY	(3)	EW008086 EW008225 EW008320
*PARASITES	(2)	EW008088 EW008201
*PARTICULATES	(1)	EW008688
*PATHOGENS	(5)	EW008194 EW008201 EW008212 EW008324 EW008328
PATHOGENS	(1)	EW008255
PCB	(1)	EW008333
*PENNSYLVANIA	(2)	EW007951 EW008238
*PERCHED BED SYSTEMS	(1)	EW007848
*PERCOLATION	(1)	EW008330
*PERFORMANCE EVALUATION	(74)	EW007005 EW007006 EW007007 EW007832 EW007920 EW007926 EW007932 EW007935 EW007936 EW007937 EW007938 EW008052 EW008077 EW008083 EW008089 EW008096 EW008100 EW008110 EW008111 EW008123 EW098128 EW008129 EW008130 EW008131 EW008133 EW008136 EW008143 EW008153 EW008155 EW008160 EW008161 EW008162 EW008171 EW008172 EW008174 EW008175 EW008178 EW008179 EW008181 EW008182 EW008184 EW008185 EW008187 EW008188 EW008194 EW008195 EW008196 EW008197 EW008198 EW008200 EW008202 EW008203 EW008204 EW008205 EW008211 EW008214 EW008216 EW008217 EW008218 EW008228 EW008230 EW008231 EW008232 EW008233 EW008247 EW008261 EW008299 EW008301 EW008302 EW008303 EW008319 EW008342 EW008354 EW008384
PERFORMANCE EVALUATION	(7)	EW008147 EW008219 EW008307 EW008311 EW008321 EW008347 EW008348
*PERMITS	(1)	EW008286
PERMITS	(3)	EW008126 EW008210 EW008354
*PERSONNEL	(2)	EW008116 EW008263
*PERSONNEL DEVELOPMENT	(1)	EW007855

*PESTICIDES (1) EW008071
PESTICIDES (5) EW008151 EW008152 EW008192 EW008311 EW008331

*PETROCHEMICALS (1) EW008304

*PETROLEUM (1) EW008304

PETROLEUM (2) EW008148 EW008347

PETROLEUM INDUSTRY (1) EW008087

*PETROLEUM PIPELINES (1) EW008221

*PHOSPHATES (2) EW008309 EW008346

*PHOSPHOROUS (2) EW008199 EW008256

PHOSPHOROUS (1) EW008318

*PHOTOGRAPHIC PROCESSING (1) EW008108

*PHOTOGRAPHY (1) EW008108

*PHTHALATES (1) EW008209

*PHYSICAL-CHEMICAL TREATMENT (1) EW008202

PHYSICAL SCIENCES (1) EW008062

PHYSICAL TREATMENT (1) EW008216

*PHYSICS (1) EW008062

*PILOT PLANTS (7) EW007919 EW008131 EW008161 EW008195 EW008200 EW008216 EW008217

*PILOT TESTS (1) EW008384

*PIPELINES (1) EW008221

*PIPES (4) EW007849 EW007927 EW008221 EW008239

PIPES (4) EW007928 EW008076 EW008093 EW008263

PIPES (WATER) (2) EW008249 EW008355

*PLANKTON (1) EW008329

*PLANKTONIC POPULATION DYNAMICS (1) EW008329

*PLANNING (53) EW006691 EW006692 EW006693 EW006694 EW007660 EW007845 EW007846
EW007847 EW007848 EW007850 EW007851 EW007932 EW007941 EW008050 EW008052
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EW008263 EW008284 EW008293 EW008294 EW008295 EW008296 EW008298 EW008300
EW008313 EW008315 EW008337 EW008352 EW008361 EW008370

PLANNING (10) EW007855 EW007927 EW007928 EW008035 EW008058 EW008070 EW008106
EW008221 EW008342 EW008369

*PLUMBING (1) EW008124

*POLICIES (1) EW008344

POLICY FORMATION (2) EW008191 EW008369
POLITICAL FACTORS (1) EW008154

POLITICS (2) EW008082 EW008325

*POLLUTANTS (8) EW008061 EW008151 EW008152 EW008209 EW008225 EW008227 EW008345 EW008347

POLLUTANTS (9) EW008072 EW008196 EW008207 EW008218 EW008223 EW008307 EW008326 EW008333 EW008343

POLLUTION ABATEMENT (1) EW008333

*POLLUTION CONTROL (36) EW004778 EW008049 EW008081 EW008082 EW008084 EW008086 EW008094 EW008106 EW008108 EW008115 EW008126 EW008127 EW008130 EW008148 EW008154 EW008158 EW008192 EW008197 EW008204 EW008205 EW008222 EW008285 EW008286 EW008296 EW008309 EW008314 EW008320 EW008321 EW008323 EW008343 EW008345 EW008348 EW008349 EW008351 EW008354 EW008365

POLLUTION CONTROL (7) EW008110 EW008227 EW008304 EW008313 EW008356 EW008363 EW008369

*POLYCHLORINATED BIPHENYLS (1) EW008333

*POLYELECTROLYTES (1) EW008307

*POPULATION (1) EW008336

*POPULATION DYNAMICS (1) EW008336

*POST SECONDARY EDUCATION (32) EW007660 EW007736 EW007832 EW008056 EW008067 EW008070 EW008071 EW008072 EW008073 EW008075 EW008103 EW008104 EW008112 EW008113 EW008114 EW008115 EW008180 EW008191 EW008284 EW008288 EW008358 EW008359 EW008360 EW008362 EW008363 EW008364 EW008377 EW008378 EW008379 EW008380 EW008381 EW008382

POST SECONDARY EDUCATION (2) EW008361 EW008365

*POSTTREATMENT (1) EW008091

*POTABLE WATER (2) EW008077 EW008125

POTABLE WATER (3) EW008109 EW008124 EW008158

POTENTIOMETRY (1) EW008151

POTW (1) EW008303

*POWDERED ACTIVATED CARBON (1) EW008218

POWER PLANTS (1) EW008332

*POWER TRANSMISSIONS (1) EW008301

*PRETREATMENT (2) EW007853 EW008127

PRETREATMENT (1) EW008084

*PREVENTIVE MAINTENANCE (2) EW007930 EW007931

*PRIORITY POLLUTANTS (1) EW008196

*PROBABILITY (1) EW008287

*PROBABILITY PAPER	(2)	EW008287 EW008288
*PROBLEMS	(1)	EW008057
*PROBLEM SOLVING	(1)	EW008325
*PROCESS CONTROL	(2)	EW008358 EW008361
PROCESS CONTROL	(1)	EW008363
*PROCESS DESCRIPTIONS	(1)	EW008231
PROCESS DESCRIPTIONS	(4)	EW608218 EW008219 EW008233 EW008318
PROCESS DESIGN	(1)	EW008362
*PROCESS MECHANICS	(1)	EW008103
*PRODUCTIVITY	(2)	EW007856 EW008143
*PROFESSIONAL ASSOCIATIONS	(1)	EW007845
*PROFESSIONAL DEVELOPMENT	(2)	EW007855 EW007857
*PROGRAM DESCRIPTIONS	(18)	EW007412 EW007834 EW008055 EW008079 EW008092 EW008120 EW008127 EW008144 EW008157 EW008164 EW008192 EW008232 EW008241 EW008286 EW008294 EW008295 EW008296 EW008300
PROGRAM DESCRIPTIONS	(1)	EW008070
*PROGRAM DEVELOPMENT	(3)	EW006693 EW006694 EW008127
PROGRAM DEVELOPMENT	(1)	EW007941
*PROGRAMMABLE CALCULATORS	(1)	EW007929
*PROGRAMMED INSTRUCTION	(1)	EW008062
*PROGRAMMING	(1)	EW007849
*PROGRAMMING LANGUAGES	(1)	EW008283
*PROJECT DESCRIPTIONS	(2)	EW007851 EW007932
PROJECT DESCRIPTIONS	(1)	EW008252
*PROJECT DESIGN	(1)	EW008234
*PROJECT PLANNING	(1)	EW007932
PROJECT PLANNING	(1)	EW008359
*PUBLICATIONS	(2)	EW008180 EW008297
*PUBLIC HEALTH	(9)	EW008114 EW008124 EW008191 EW008212 EW008213 EW008229 EW008266 EW008267 EW008355
PUBLIC HEALTH	(11)	EW008063 EW008111 EW008145 EW008156 EW008192 EW008193 EW008194 EW008201 EW008250 EW008353 EW008388

PUBLIC MEETINGS	(1)	EW008035
*PUBLIC OPINION	(1)	EW008082
PUBLIC OPINION	(1)	EW008154
*PUBLIC POLICY	(1)	EW008191
*PUBLIC SERVICES	(1)	EW008240
*PUBLIC WORKS	(1)	EW008235
*PULP INDUSTRY	(3)	EW008086 EW008225 EW008320
*PUMPING	(1)	EW008183
*PUMPS	(4)	EW007935 EW007950 EW008117 EW008301
PUMPS	(2)	EW007937 EW008263
*PUMP SELECTION	(1)	EW007935
PURIFICATION	(1)	EW008332
QUANTITATIVE ANALYSIS	(1)	EW008191
*RADIOACTIVE MATERIALS	(1)	EW008156
*RADIOACTIVE WASTES	(2)	EW008327 EW008332
*RATES	(3)	EW007850 EW008268 EW008344
*RATE STRUCTURES	(1)	EW007850
*RECLAMATION	(1)	EW008203
*RECOMMENDATIONS	(3)	EW007008 EW008125 EW008134
*RECORDKEEPING	(3)	EW008116 EW008157 EW008186
*RECORDS	(3)	EW007931 EW008116 EW008157
*RECREATION	(1)	EW008213
RECREATION	(1)	EW008118
*RECYCLING	(4)	EW007919 EW008063 EW008122 EW008136
REFERENCE MATERIALS	(1)	EW008371
*REGIONAL PLANNING	(1)	EW008052
*REGULATIONS	(10)	EW007660 EW008064 EW008082 EW008134 EW008262 EW008265 EW008286 EW008338 EW008351 EW008354
REGULATIONS	(4)	EW008119 EW008120 EW008250 EW008369
*REHABILITATION	(1)	EW007851
*RELIABILITY	(1)	EW007935
*REMOTE SENSING	(2)	EW008149 EW008150

*RENEWABLE ENERGY TECHNOLOGY (1) EW008359
*REPAIRS (1) EW008117

REQUIREMENTS (1) EW008210

*RESEARCH (7) EW007845 EW007850 EW007933 EW007936 EW008170 EW008193 EW008376

*RESEARCH METHODOLOGY (2) EW008184 EW008213

*RESEARCH REPORTS (138) EW007857 EW008071 EW008077 EW008078 EW008085 EW008086 EW008087
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RESEARCH REPORTS (7) EW008084 EW008112 EW008113 EW008114 EW008173 EW008210 EW008371

RESIDUE ANALYSIS (1) EW008334

RESIN ADSORPTION (1) EW008196

*RESINS (1) EW008211

RESINS (1) EW008316

*RESOURCE MATERIALS (1) EW008297

*RESOURCE RECOVERY (1) EW008234

*RESPONSE TEAMS (1) EW008240

REVEGETATION (1) EW008203

*REVENUES (2) EW008244 EW008245

*REVERSE OSMOSIS (3) EW008091 EW008219 EW008234

REVERSE OSMOSIS (1) EW008384

*RIPARIAN DOCTRINE (1) EW008119

RIVER BASINS (1) EW008315

*RIVERS (1) EW008204

RIVERS (4) EW008153 EW008323 EW008329 EW008333

*ROTATING BIOLOGICAL CONTACTORS (1) EW007936

*RUNOFF (5) EW008294 EW008295 EW008296 EW008331 EW008348

RUNOFF	(2)	EW008135 EW008315
*RURAL AREAS	(3)	EW007846 EW008053 EW008376
RURAL AREAS	(1)	EW007950
*SAFE DRINKING WATER ACT	(2)	EW008265 EW008338
*SAFETY	(13)	EW008055 EW008065 EW008066 EW008067 EW008068 EW008069 EW008073 EW008074 EW008076 EW008156 EW008372 EW008373 EW008375
SAFETY	(3)	EW008075 EW008149 EW008150
*SAFETY EDUCATION	(4)	EW008055 EW008074 EW008372 EW008373
SAFETY EQUIPMENT	(2)	EW008372 EW008373
*SALTWATER INTRUSION	(1)	EW008054
*SAMPLING	(8)	EW008064 EW008077 EW008079 EW008080 EW008095 EW008162 EW008209 EW008211
SAMPLING	(4)	EW008061 EW008075 EW008135 EW008213
*SANITATION	(1)	EW008359
SANITATION	(1)	EW008368
*SCANDINAVIA	(1)	EW008182
SCHEDULING	(1)	EW008157
*SCHOOLS	(1)	EW008235
*SCIENCE EDUCATION	(1)	EW008062
SCIENCE EDUCATION	(1)	EW007736
*SCIENCE INSTRUCTION	(1)	EW008062
*SEASONAL VARIATIONS	(1)	EW008177
*SECONDARY TREATMENT	(2)	EW008128 EW008129
*SECTION 208	(1)	EW008300
*SEDIMENTATION	(2)	EW008129 EW008152
SEDIMENTATION	(1)	EW008107
*SEDIMENTS	(2)	EW008152 EW008255
SEDIMENTS	(1)	EW008333
*SEISMIC ACTIVITY	(1)	EW008093
*SEPARATION TECHNIQUES	(1)	EW008307
*SEPTIC TANKS	(1)	EW007950
*SERVICES	(1)	EW008240
*SEWAGE	(2)	EW008226 EW008327

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SEWAGE (1) EW008106
*SEWAGE FILTRATION (2) EW008318 EW008319
*SEWAGE SLUDGE (3) EW008203 EW008212 EW008215
*SEWAGE SYSTEMS (1) EW007928
*SEWAGE TREATMENT (1) EW008307
*SEWERS (6) EW007950 EW008051 EW008130 EW008239 EW008245 EW008249
SEWERS (2) EW008176 EW008263
*SEWER SYSTEMS (1) EW008249
*SHELLFISH (1) EW008314
*SHELLFISH INDUSTRY (1) EW008314
*SIDESTREAMS (1) EW008096
*SILVER (1) EW008136
SITE CLEANUP (1) EW008365
*SITE SELECTION (1) EW008221
SITE SELECTION (2) EW007008 EW008353
*SKILL DEVELOPMENT (5) EW006691 EW006692 EW006693 EW008378 EW008380
SKILL DEVELOPMENT (2) EW008381 EW008382
SKIMMERS (1) EW008321
SLIDE PROGRAMS (2) EW008377 EW008378
*SLIPLINING (1) EW008239
*SLUDGE (21) EW007007 EW007008 EW007832 EW007848 EW007854 EW007938 EW007939
EW007940 EW007951 EW008052 EW008103 EW008131 EW008170 EW008173 EW008181
EW008200 EW008236 EW008238 EW008250 EW008251 EW008255
SLUDGE (9) EW008129 EW008195 EW008201 EW008212 EW008220 EW008307 EW008335
EW008348 EW008380
*SLUDGE DISPOSAL (5) EW007008 EW007938 EW007951 EW008052 EW008203
SLUDGE DISPOSAL (1) EW008215
SLUDGE DRYING (1) EW008303
*SLUDGE STABILIZATION (1) EW008220
*SLUDGE TREATMENT (9) EW007834 EW008103 EW008131 EW008172 EW008175 EW008201 EW008233
EW008335 EW008371
SLUDGE TREATMENT (1) EW008348
SLUDGE VOLUME INDEX (1) EW008131
*SOCIAL FACTORS (1) EW008325

SOCIAL FACTORS	(1)	EW008298						
SOCIOECONOMIC ASPECTS	(1)	EW008086						
SOCIOECONOMIC FACTORS	(1)	EW008320						
*SOCIOECONOMIC IMPACTS	(1)	EW008298						
SOIL EROSION	(1)	EW008331						
*SOIL FILTRATION	(1)	EW008226						
*SOILS	(4)	EW008215	EW008226	EW008330	EW008376			
SOILS	(4)	EW007006	EW007643	EW008333	EW008353			
SOIL STUDIES	(1)	EW008199						
*SOIL TEMPERATURE	(1)	EW008215						
*SOLAR ENERGY	(1)	EW008303						
*SOLDER	(1)	EW008124						
*SOLID WASTES	(3)	EW008234	EW008320	EW008327				
SOLID WASTES	(3)	EW008106	EW008192	EW008225				
*SOLVENTS	(1)	EW008160						
*SORBENTS	(1)	EW008211						
SPECTROSCOPY	(1)	EW008151						
*SPILL CLEAN-UP	(2)	EW008197	EW008222					
*SPILLS	(4)	EW008068	EW008069	EW008070	EW008204			
SPOT TESTS	(1)	EW008151						
*STABILIZATION PONDS	(1)	EW008379						
*STAFF DEVELOPMENT	(3)	EW007855	EW007856	EW007857				
STAFFING	(1)	EW008361						
*STAFF QUALIFICATIONS	(1)	EW008164						
*STANDARDS	(7)	EW007660	EW008064	EW008082	EW008134	EW008177	EW008210	EW008338
STANDARDS	(6)	EW008084	EW008135	EW008147	EW008250	EW008285	EW008286	
STATE LEGISLATION	(1)	EW008120						
*STATE-OF-THE-ART REVIEWS	(11)	EW008048	EW008049	EW008061	EW008071	EW008075	EW008119	EW008170
	EW008231	EW008250	EW008369	EW008371				
*STATE PLANS	(1)	EW008035						

*STATE PROGRAMS	(1)	EW008120				
*STATE ROLE	(1)	EW008265				
*STATISTICS	(3)	EW008191	EW008287	EW008288		
*STATUS REPORTS	(1)	EW007906				
STEAM STRIPPING	(1)	EW008196				
*STORAGE	(1)	EW008076				
*STORMWATER	(5)	EW007847	EW008054	EW008130	EW008223	EW008348
STORMWATER	(3)	EW008294	EW008295	EW008296		
*STREAMS	(1)	EW008135				
STREAMS	(2)	EW008153	EW008323			
*STRESS FUNCTION	(1)	EW008227				
*STRIP MINES	(1)	EW008203				
*STRIP MINING	(3)	EW008149	EW008150	EW008349		
*STUDY GUIDES	(2)	EW008380	EW008381			
SULFUR DIOXIDE	(1)	EW008231				
SUPERVISION	(1)	EW006694				
*SURFACE RUNOFF	(5)	EW007847	EW008054	EW008130	EW008223	EW008366
SURFACE RUNOFF	(1)	EW008348				
*SURFACTANTS	(1)	EW008346				
SURFACTANTS	(1)	EW008309				
*SURVEYS	(4)	EW007906	EW008164	EW008184	EW008213	
*SUSPENDED SOLIDS	(1)	EW008198				
SUSPENDED SOLIDS	(1)	EW008129				
*SWEDEN	(1)	EW008182				
*SWIMMING POOLS	(1)	EW008113				
*SYSTEM DESIGN	(2)	EW007938	EW007939			
*SYSTEMS ANALYSIS	(1)	EW008078				
TANKS	(1)	EW008076				
*TCDD	(1)	EW008098				
*TEACHING GUIDES	(3)	EW007736	EW008380	EW008381		

*TECHNOLOGICAL ADVANCEMENTS (14) EW007009 EW007926 EW007950 EW008095 EW008104 EW008112 EW008116 EW008145 EW008155 EW008189 EW008233 EW008302 EW008303 EW008310

TECHNOLOGICAL ADVANCEMENTS (4) EW008110 EW008113 EW008114 EW008128

*TECHNOLOGY (20) EW007930 EW007933 EW008100 EW008104 EW008112 EW008113 EW008114 EW008182 EW008195 EW008196 EW008266 EW008267 EW008269 EW008284 EW008303 EW008312 EW008317 EW008354 EW008360 EW008376

TECHNOLOGY (12) EW007950 EW008068 EW008069 EW008070 EW008082 EW008084 EW008090 EW008110 EW008130 EW008302 EW008309 EW008335

*TELECOMMUNICATIONS (1) EW008189

*TELECONFERENCING (1) EW008189

*TESTING (2) EW008064 EW008077

*TEXAS (1) EW008051

*TEXTBOOKS (1) EW008191

*TEXTILE WASTES (1) EW007005

*THEORY Z (1) EW007856

THERMAL POLLUTION (1) EW008314

*THERMOPHILIC DIGESTION (1) EW008171

THERMOPHILIC DIGESTION (1) EW008233

*THM (1) EW008179

*TIN-ANTIMONY (1) EW008124

TOXICITY (2) EW008227 EW008346

*TOXICOLOGY (3) EW008214 EW008345 EW008347

TOXICOLOGY (1) EW008072

*TOXIC SUBSTANCES (12) EW008065 EW008066 EW008067 EW008068 EW008069 EW008072 EW008078 EW008170 EW008225 EW008227 EW008345 EW008388

TOXIC SUBSTANCES (3) EW008075 EW008204 EW008353

TRACE METALS (1) EW008072

*TRACE ORGANICS (1) EW008218

*TRAINERS (2) EW007855 EW008057

*TRAINING (17) EW004778 EW006693 EW007855 EW007856 EW007857 EW007931 EW007940 EW008058 EW008060 EW008180 EW008184 EW008185 EW008186 EW008187 EW008188 EW008359 EW008375

TRAINING (1) EW007832

*TRAINING MATERIALS (1) EW007736

*TRAINING NEEDS (1) EW008116

*TRAINING PROGRAMS (10) EW004778 EW006691 EW006694 EW008068 EW008189 EW008377 EW008378

EW008379 EW008380 EW008382
TRAINING PROGRAMS (3) EW008074 EW008372 EW008373
*TRAINING TECHNIQUES (1) EW006692
*TRANSFER OF LEARNING (1) EW008185
*TRANSFER OF TRAINING (1) EW007857
*TRICHLOROETHYLENE (1) EW008160
*TRICKLING FILTERS (1) EW008129
*TRIHALOMETHANES (1) EW008179
*TROUBLESHOOTING (2) EW008363 EW008380
TROUBLESHOOTING (1) EW008103
*TURBIDITY (1) EW008161

*ULTRAVIOLET LIGHT (3) EW007009 EW007926 EW008339
ULTRAVIOLET LIGHT (1) EW008194
*ULTRAVIOLET RADIATION (2) EW007933 EW008230
UNIT PROCESSES (1) EW008085
*UNITS OF STUDY (1) EW008056
*UPGRADING (1) EW008252
*URBAN AREAS (10) EW007927 EW008105 EW008130 EW008135 EW008294 EW008295 EW008296 EW008300 EW008313 EW008348
URBANIZATION (1) EW008106
*U.S. ARMY (1) EW008089
*UTILITIES (8) EW007851 EW008050 EW008053 EW008242 EW008243 EW008244 EW008245 EW008284
UTILITIES (2) EW007846 EW008155
*VACUUM FILTERS (1) EW008237
*VALUE ENGINEERING (1) EW007928
*VALUES (1) EW006694
*VALVES (3) EW007929 EW008269 EW008301
VALVES (1) EW008076
*VARIABLE FREQUENCY DRIVES (1) EW007937
VIDEOCONFERENCING (1) EW008189
*VIRUSES (2) EW008088 EW008194

*VOCATIONAL EDUCATION (1) EW008056
*WASHINGTON (1) EW008053

*WASHINGTON D.C. (1) EW008121

*WASTE DISPOSAL (31) EW007006 EW007832 EW007848 EW007938 EW007951 EW008052 EW008070 EW008071 EW008090 EW008133 EW008159 EW008173 EW008181 EW008203 EW008205 EW008210 EW008212 EW008215 EW008226 EW008236 EW008238 EW008250 EW008251 EW008255 EW008327 EW008335 EW008343 EW008365 EW008368 EW008376 EW008388

WASTE DISPOSAL (4) EW007008 EW008106 EW008170 EW008234

*WASTE MANAGEMENT (3) EW008090 EW008332 EW008365

WASTE MANAGEMENT (1) EW007951

WASTES (1) EW008327

*WASTE SPILLS (1) EW008205

WASTE SPILLS (1) EW008204

*WASTE TREATMENT (3) EW008323 EW008332 EW008368

WASTE TREATMENT (2) EW008365 EW008379

*WASTEWATER (4) EW008097 EW008098 EW008099 EW008105

WASTEWATER (1) EW008328

*WASTEWATER ANALYSIS (6) EW008146 EW008208 EW008209 EW008214 EW008225 EW008256

WASTEWATER ANALYSIS (1) EW008328

*WASTEWATER COLLECTION (12) EW007847 EW007928 EW007940 EW007950 EW008051 EW008093 EW008130 EW008176 EW008223 EW008239 EW008263 EW008348

WASTEWATER COLLECTION (1) EW008249

WASTEWATER DISPOSAL (1) EW008360

*WASTEWATER REUSE (2) EW008089 EW008122

WASTEWATER REUSE (1) EW008063

*WASTEWATER TREATMENT (133) EW004778 EW007005 EW007006 EW007007 EW007008 EW007009 EW007832 EW007834 EW007848 EW007852 EW007906 EW007919 EW007931 EW007932 EW007936 EW007937 EW007939 EW007940 EW007950 EW007951 EW008049 EW008052 EW008055 EW008064 EW008083 EW008084 EW008085 EW008086 EW008087 EW008089 EW008090 EW008091 EW008093 EW008096 EW008103 EW008104 EW008108 EW008111 EW008112 EW008113 EW008114 EW008122 EW008127 EW008128 EW008129 EW008131 EW008133 EW008136 EW008145 EW008146 EW008147 EW008170 EW008171 EW008172 EW008173 EW008174 EW008176 EW008177 EW008180 EW008181 EW008182 EW008194 EW008195 EW008196 EW008198 EW008199 EW008200 EW008201 EW008202 EW008208 EW008209 EW008212 EW008214 EW008215 EW008216 EW008217 EW008220 EW008225 EW008226 EW008228 EW008230 EW008232 EW008233 EW008236 EW008237 EW008238 EW008250 EW008253 EW008255 EW008261 EW008262 EW008264 EW008269 EW008284 EW008285 EW008286 EW008299 EW008301 EW008302 EW008303 EW008307 EW008311 EW008312 EW008316 EW008317 EW008318 EW008319 EW008328 EW008330 EW008335 EW008339 EW008342 EW008343 EW008346 EW008348 EW008351 EW008353 EW008356 EW008358 EW008360 EW008362 EW008363 EW008364 EW008371 EW008374 EW008376 EW008377 EW008378 EW008379 EW008380 EW008381 EW008382 EW008384

WASTEWATER TREATMENT (2) EW008115 EW008203
*WASTEWATER TREATMENT PLANTS (1) EW008252

*WATER (1) EW008054

*WATER ANALYSIS (2) EW008098 EW008151
*WATER CHEMISTRY (1) EW008308
*WATER CONSERVATION (3) EW008063 EW008246 EW008352
*WATER DEMAND (1) EW008331
WATER DEMAND (1) EW008360
*WATER DISTRIBUTION (13) EW007846 EW007850 EW007851 EW007927 EW007928 EW007929 EW007940 EW098050 EW008053 EW008093 EW008163 EW008183 EW008370
*WATER FLOW (1) EW007849
*WATER HAMMER (1) EW007929
WATER HEATING (1) EW008303
*WATER HYACINTH (1) EW008312
*WATER JETS (1) EW008197
*WATER METERS (1) EW008155
*WATERNET (1) EW008241
*WATER POLLUTION (12) EW008081 EW008106 EW008107 EW008108 EW008110 EW008304 EW008306 EW008308 EW008309 EW008314 EW008333 EW008336
WATER POLLUTION (4) EW008307 EW008326 EW008345 EW008368
*WATER POLLUTION CONTROL (7) EW007906 EW007926 EW008154 EW008320 EW008321 EW008323 EW008325
*WATER POLLUTION CONTROL FEDERATION (1) EW008285
*WATER PROJECTS (2) EW008092 EW008193
WATER PROJECTS (1) EW008190
*WATER PUMPS (1) EW007935
*WATER QUALITY (94) EW007643 EW007845 EW007846 EW007906 EW007920 EW007933 EW007934 EW008048 EW008061 EW008064 EW008072 EW008077 EW008079 EW008080 EW008082 EW008086 EW008088 EW008106 EW008109 EW008124 EW008125 EW008126 EW008134 EW008135 EW008148 EW008151 EW008152 EW008153 EW008154 EW008156 EW008158 EW008159 EW008160 EW008162 EW008173 EW008177 EW008178 EW008179 EW008183 EW008192 EW008193 EW008197 EW008204 EW008207 EW008211 EW008213 EW008214 EW008218 EW008219 EW008222 EW008227 EW008228 EW008237 EW008247 EW008248 EW008256 EW008262 EW008265 EW008266 EW008267 EW008285 EW008286 EW008294 EW008295 EW008296 EW008298 EW008300 EW008304 EW008306 EW008308 EW008309 EW008313 EW008314 EW008320 EW008321 EW008323 EW008324 EW008325 EW008328

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EW008346 EW008347 EW008349 EW008351 EW008352 EW008355 EW008369

WATER QUALITY (20) EW008049 EW008097 EW008098 EW008099 EW008100 EW008111 EW008115
EW008147 EW008208 EW008225 EW008226 EW008229 EW008299 EW008301 EW008310
EW008326 EW008334 EW008339 EW008377 EW008378

*WATER RATES (4) EW007850 EW008246 EW008268 EW008344

*WATER RECLAMATION (1) EW008317

*WATER RESOURCES (34) EW007845 EW007940 EW008048 EW008054 EW008063 EW008092 EW008109
EW008118 EW008119 EW008120 EW008121 EW008122 EW008190 EW008193 EW008241
EW008242 EW008243 EW008244 EW008245 EW008246 EW008284 EW008293 EW008297
EW008300 EW008304 EW008313 EW008315 EW008326 EW008336 EW008344 EW008352
EW008366 EW008369 EW008370

WATER RESOURCES (7) EW007412 EW008049 EW008156 EW008334 EW008338 EW008342 EW008349

*WATER RESOURCES COUNCIL (1) EW008297

*WATER REUSE (1) EW008214

*WATER RIGHTS (2) EW008118 EW008119

*WATERSHED MANAGEMENT (1) EW008369

*WATERSHEDS (3) EW008094 EW008227 EW008331

*WATER STORAGE (1) EW008223

WATER STORAGE (1) EW008048

*WATER SUPPLY (37) EW007850 EW007851 EW007940 EW008050 EW008053 EW008054 EW008063
EW008093 EW008118 EW008120 EW008121 EW008124 EW008125 EW008155 EW008156
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EW008243 EW008244 EW008245 EW008248 EW008268 EW008315 EW008326 EW008344
EW008352 EW008355 EW008359 EW008360 EW008369 EW008370

WATER SUPPLY (4) EW008100 EW008119 EW008368 EW008384

*WATER SYSTEMS (1) EW008050

*WATER TREATMENT (55) EW007845 EW007846 EW007851 EW007853 EW007854 EW007932 EW007933
EW007934 EW007935 EW007937 EW007938 EW007940 EW008048 EW008050 EW008064
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EW008241 EW008247 EW008261 EW008265 EW008266 EW008267 EW008269 EW008284
EW008299 EW008307 EW008310 EW008332 EW008360 EW008364 EW008368 EW008384

*WATER USE (4) EW008118 EW008134 EW008245 EW008246

WATER USE (4) EW008119 EW008120 EW008121 EW008313

WATER WELLS (2) EW008326 EW008360

*WAVE ANALYSIS (1) EW007929

*WEIBULL PROBABILITY PAPER (1) EW008287

WILDLIFE (1) EW007412

*WORK ENVIRONMENT (2) EW008074 EW008075
*WORKSHOPS (2) EW004778 EW008057